CHANGE SERVICE REQUESTED

February 8, 2008 Volume 30 Number 6 www.processor.com



Build A Better Wireless Shield

Experts Weigh In With Tips For Boosting Network Security

by Christian Perry

WHEN ENTERPRISES make the move from a wired to wireless infrastructure, the danger of disregarding the importance of security often rears its head. The myriad challenges inherent with simply installing and maintaining a wireless network can easily push security to the wayside. However, that trap can prove fatal.

"Application of stringent security controls to wireless is crucial because, when compared to wired networks, [wireless networks] present a greater security threat surface," says Mauricio Sanchez, chief security architect for ProCurve Net-

working at HP (www.hp.com). "Unlike wired networks that have a definite physical boundary, wireless networks' amorphous boundaries present unique security challenges in terms of confidentiality, integrity, and availability."



The ability to sniff and inject packets onto a wireless network, Sanchez explains, requires efficient security controls, and without them, companies could fall prey to wireless attacks such as those revealed last year that exposed tens of millions of credit and debit cards stored in TJX databases to potential fraud.

Focus Heavily On Device Selection

According to Ari Takanen, founder and CTO of Codenomicon (www.codenomicon .com), it's essential to not only treat wireless networks as untrusted networks, but wireless devices should be considered untrusted, as well. Enterprises should select high-quality devices and components both on the client side and the infrastructure side to avoid unexpected post-deployment costs. However, wireless networks are often separated from the physical enterprise due to the expectation of threats, and this separation can improve visibility across the wireless network.

"True security is never applied, but it has to be part of the entire deployment process. . . . Selection of devices and the network architectures are best practices in procurement and deployment of any network. The security mechanisms,

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Improve Network **Monitoring**

Get The Most From Your Network's Watchers

by Sixto Ortiz Jr.

IMAGINE A BANK equipped with a security system that only protects half of the bank building's area, leaving multiple entry points into the building completely vulnerable. No one in their right mind would ever install

such a deeply flawed system unless they wanted the bank to eventually be robbed.

The same analogy applies to network monitoring systems that help protect enterprise network resources: Many enterprises deploy expensive monitoring devices, but if they only see half of the network traffic, are they truly delivering value? As networks continue to evolve toward more advanced technologies—such as 10GbE—administrators must ensure their network monitoring

Many enterprises deploy expensive monitoring devices, but if they only see half of the network traffic, are they truly delivering value? can keep pace. After all, you know nothing about what you can't monitor.

Improving Monitoring SPAN

As a result, many manufacturers and industry watchers are proposing replacing SPAN (Switched Port Analyzer) as a means of enhancing network monitoring.

Jamie Lerner, CEO of CITTIO (www .cittio.com), says monitoring via SPAN port or mirror basically redirects all Ethernet traffic from a switch to an external monitoring device, such as a sniffer or analyzer. The problem with this approach is one of scalability, especially on large and 10GbE networks.

"The number of monitoring devices that have to be deployed to achieve full network coverage could be quite large, especially in more complicated VLAN-based network architectures," says Lerner. That is why, he adds, flow analysis via IPFIX (IP Flow Information Export) is the direction in which network traffic analysis is moving.

Besides scalability, another issue with SPAN is that it may not provide a complete view of traffic on a network segment regardless of network speed. According to Chris

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Wireless Networking

Whether your enterprise has already installed a wireless network, is in the process of doing so, or is still just thinking about wireless, these articles can help.

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Automating routine IT tasks can minimize headaches, both for networks and those running them.

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In an effort to ramp up bandwidth, carriers and enterprises are rolling out two technologies-MPLS and 10GbE-both designed to deliver data faster and more efficiently.

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Product Releases | 15

■ A10 Networks announced enhancements for its AX Series Advanced Traffic Manager appliances.

■ ATEN released the KL1100 Dual Rail LCD PS/2-USB KVM Console as part of its Altusen product line. ■ Atlas says the Northwind Kodiak Series 7.5-ton unit portable air conditioner is ideal for spot cooling, indoors or out. ■ Barracuda Networks announced the newest features in the Barracuda Instant Messenger Firewall. ■ ConSentry

Networks released the ConSentry LANShield Switch based on the company's Intelligent Switching architecture. ■ Fortiva released SmartStore, an on-demand email archiving solution that complies to Federal Rules of Civil Procedure. ■ Policy Commander 2.0, a security software application for Windows desktop, laptop, and server computers, is now available from New **Boundary Technologies.** ■ **Panduit** introduced

the Cool Boot Raised Floor Assembly, which reduces bypass air in a hot aisle/cold aisle environment. ■ RF Code announced a new product that lets IT personnel perform automated real-time monitoring of rack-level assets.

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PHYSICAL INFRASTRUCTURE

FEBRUARY 8, 2008

STORAGE FEBRUARY 8, 2008

Access At The Rack

Chatsworth's LCD/KVM Console Provides Easy Access To Up To 16 Computers

As a Business Grows, IT resources must grow, too. By adding additional computers and other hardware, however, space tends to become more constrained. To help companies save valuable rack space without sacrificing functionality, Chatsworth Products created the new LCD/KVM Console. This console provides easy access to multiple rackmount peripherals, and it requires only 1RMU of rackmount space.



Chatsworth's LCD/KVM Console comes in single-, 8-, or 16-port versions and provides access to multiple computers using a set of rackmount peripherals. Multicomputer units come with a KVM switch. The console comes with a 15-, 17-, or 19-inch LCD capable of displaying resolutions of up to 1,280 x 1,024 SXGA. A tempered glass panel protects the display.

This 19-inch EIA rackmount shelf combines the LCD panel, a 106-key

Chatsworth Products LCD/KVM Console

Starts at about \$2,085

Combines an LCD, a 106-key keyboard, and a touchpad into a single unit that can connect up to 16 computers

(800) 834-4969

www.chatsworth.com



CHATSWORTH PRODUCTS, INC.

keyboard with numeric pad, and a built-in touchpad. The LCD/KVM Console connects to computers with PS/2 or USB keyboard and mouse connections using a single cable connection. Supported OSes include DOS, Windows, HP Unix, Linux, Novel 3.12-6, and Sun.

For increased ease of use and manageability, the Chatsworth console has built-in dual slides that let the LCD and the keyboard tray open independently. A keyed lock secures the console in the closed position when not in use. The KVM switch offers an on-screen display menu and password protection. With the KVM switch, users can search for computers by name or by using hotkey controls such as auto scan.

The console comes with an internal universal power supply with a connector for international use and a power cord with NEMA 5-15P plug.

Neverfail Protects VMware Infrastructure

Monitor & Clone Your VMware VirtualCenter Server

TO HELP ENSURE IT STAFF won't lose key VMware VirtualCenter services, Neverfail for VMware VirtualCenter clones and continuously replicates the VMware VirtualCenter server's configuration settings, data, and SQL Server databases onto a sec-

ondary server.

The Neverfail for VMware VirtualCenter software proactively monitors the VMware VirtualCenter server and its surrounding environment. If any major issues arise with either the VMware VirtualCenter server or

connected hardware, the Neverfail software automatically fails over VMware VirtualCenter to the secondary server with the cloned VMware VirtualCenter data. Neverfail for VMware Virtual-Center also maintains connectivity to the primary server until the outage can be resolved, so IT admins can continue to use the VirtualCenter management features with up-to-date data.

Neverfail for VMware VirtualCenter checks the health of the management server software, the hardware for the VirtualCenter server and associated components (such as License Server), the network infrastructure, and the OS. In some cases, the software may simply alert IT staff to a problem, while more serious issues, such as OS failure or total machine failure, cause automatic fail-

over to the secondary server. If Neverfail for VMware VirtualCenter does switch to the secondary server, IT staff can continue to use the features of the VMware VirtualCenter without problems, so end users won't lose access to apps and IT staff won't lose VirtualCenter's

proactively monitors server health. apps



Neverfail for VMware VirtualCenter duplicates your VMware VirtualCenter server and proactively monitors server health.

Neverfail For VMware VirtualCenter

management or control operations.

Starts at \$10,000 per pair of servers

Software that monitors and clones the VMware VirtualCenter server to ensure IT staff can use the management and control tools of the VMware VirtualCenter

(512) 327-5777

www.neverfailgroup.com



NETWORKING & VPN

FEBRUARY 8, 2008

Give Users More Control

Ensim Unify Enterprise Edition 1.5 Improves System Management Routines

SOMETIMES THE BEST WAY to increase the productivity of employees is to give those employees self-service tools that offer more administrative rights for basic tasks, such as managing distribution lists and resetting passwords (including configuring and updating passwords at will).

Ensim's Unify Enterprise 1.5 system management software provides such capabilities. It lets enterprises quickly perform change requests within a unified communications infrastructure and automate the provisioning of users, applications, and devices, all of which results in reduced errors and administrative costs, in addition to the quicker turnaround of setting up new users.

This upgrade of Unify Enterprise supports Windows Mobile and BlackBerry devices and Microsoft Active Directory

Unify Enterprise Edition 1.5

\$20 per user annually (maintenance included); \$39 perpetual license (maintenance separate); free trial available.

System management software that features a quick-start configuration wizard, enhanced Web services API, and template-based interface

(888) 248-4003

www.ensim.com





Ensim's Web-based Quick-Start Wizard walks users through multiple configurations settings.

2003, Microsoft Exchange 2003/2007, and BlackBerry Enterprise Server.

The template-based interface and Web-based Quick-Start Wizard walk administrators through post-installation configuration and walk employees through self-configuration options. Among other things, Edition 1.5 also lets administrators set default groups for users; lock down user templates; manage user attributes; and transfer user accounts.

Additional features in this upgrade include a Web-based interface that offers systems administrators customization and management control over administration rights based on each administrator's role. Systems administrators can also configure the software based on internal business policies. Edition also 1.5 includes an enhanced Web services API to execute integration with enterprises' current systems.

NETWORKING & VPN

FEBRUARY 8, 2008

Network Monitoring With SolarWinds

ipMonitor v9.0 Features SmartMonitor Technology

WHEN A PRODUCT COMES ALONG that automates common tasks and makes monitoring critical systems easier, IT takes notice. That's the case with SolarWinds' latest version of the ip-Monitor network, server, and application monitoring system.

SolarWinds' offering is a fully Webbased utility that features an easy-to-use graphical interface and concise dashboard views that deliver instant insight into the health of the network and application infrastructure.

The software comes with more than 50 built-in monitors for reporting on routers, switches, and servers. Built-in app monitors include Active Directory, DNS, Microsoft Exchange, FTP, Web, IMAP, and SMTP.

Other capabilities include rapid discovery of IP-based network devices, the

SolarWinds ipMonitor v9.0

Starts at \$1,495

Monitors your network, server, and applications

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www.solarwinds.com





The Dashboard tab lets ipMonitor 9.0 users get an at-a-glance snapshot of resource utilization and network performance.

ability to group devices logically and dynamically, a network mapping capability that tracks data and lets users take corrective actions in the event of a failure, and automated recovery and remediation functions. Once a device is discovered, users can look up the device's attributes, query a server or device for a list of appropriate monitors that work with it, and add new monitors manually.

The ipMonitor v9.0's SmartMonitor capability recommends the best and most appropriate settings for analyzing the organization's specific application and network infrastructure, eliminating the task of manually selecting and tuning the monitors. Admins can also roll out ipMonitor v9.0 without an agent.

MarketPlace →



NEWS



Microsoft Posts Strong Earnings; Vista SP1 Expected Soon

MICROSOFT HAD REVENUES last quarter of \$16.37 billion and earnings per share of 50 cents, increases of 30% and 92%, respectively, compared to a year ago. Chris Liddell, Microsoft CFO, says the revenue figure beats the company's previous record by \$2 billion. Revenues for the Microsoft Business Division were up 23% compared to a year ago in part because of sales of the recently released versions of Office, SharePoint, and Exchange. In other news, Service Pack 1 of Windows Vista is expected to be released within the next few weeks. Several sources have identified a potential release date of Feb. 15, although Microsoft has yet to confirm that date.

Sprint Top Execs Leave

ON THE HEELS of the announcement of substantial customer losses and planned job cuts totaling about 4,000, Sprint is undergoing an executive shakeup, with three major executives leaving the company. Paul Saleh, CFO; Tim Kelly, chief marketing officer; and Mark Angelino, president of sales and distribution, are departing their positions in what Sprint has called part of CEO Dan Hesse's plan of selecting new leadership. Saleh, who was CFO at Nextel when Sprint acquired it in 2005, had served as acting CEO after Gary Forsee resigned in October.

Symantec's Earnings Beat Projections

BOOSTED BY INCREASED international sales and growth in its service business, Symantec's earnings for the period that ended Dec. 28 have surpassed expectations. Revenue had been projected to reach \$1.45 billion, according to Thomson Financial. However, Symantec reported that its revenue, excluding charges, was \$1.53 billion, up 15% year over year. Earnings were 33 cents per share, compared to analyst estimates of 28 cents per share. Overall, international revenue increased by 21% year over year, with the greatest growth in Europe, the Middle East, and Africa. While those regions experienced growth of 26% compared to last year, revenue in Asia grew 19%.

■ Venture Capital Investments Reach High

THE AMOUNT OF MONEY invested by venture capitalists in 2007 reached its highest level since 2001, according to the MoneyTree Report compiled by PricewaterhouseCoopers and the National Venture Capital Association. The report is based on data from Thomson Financial. Last year, venture capitalists invested \$29.4 billion in 3,813 deals, up 10.8% and 5%, respectively, compared to 2006. Two venture capital sectors—Clean Technology and Life Sciences—had record levels of investments last year. Mark Heesen, president of the National Venture Capital Association, says the increase in capital investment was "extremely rational" and that the single-digit increase in deal volume "suggests that a fair amount of discipline is being applied to investment decisions."

■ VMware Revenue Up 88%

VIRTUALIZATION SOLUTION PROVIDER VMware posted a fourth-quarter revenue of \$412 million and fiscal year 2007 revenue of \$1.33 billion, up 80% and 88%, respectively, compared to 2006 numbers. Net income for the fourth quarter was \$78 million, or about 19 cents a share, compared to \$31 million, or about 9 cents a share, a year ago. Diane Greene, VMware president and CEO, says the company now has more than 100,000 customers, 500 technology and consulting partners, 10,000 go-to-market partners, and more than 5,000 employees.

Nokia Has Profitable Quarter

IN A DEAL that would be worth \$153 million in cash, Nokia has offered to purchase Norwegian application framework developer Trolltech. The company's Qtopia framework is used to build user interfaces for embedded and mobile devices, and its Qt is a cross-platform application development framework. Through the acquisition, Nokia hopes to improve the interfaces on its S40 mobile phone and S60 smartphone platforms. Nokia's Q4 numbers show that the company remains strong, as it posted a 57% increase in earnings, or about 68 cents per share. During Q4, the company sold 133.5 million phones, which is more than the combined total for its three closest competitors.

■ IBM Acquires AptSoft

IN ORDER TO HELP strengthen its SOA (service-oriented architecture) and business process management software offerings, IBM recently acquired AptSoft. Financial details have not been disclosed. AptSoft is a privately held developer of business event processing software based in Burlington, Mass. The company's software helps companies reduce the time and costs involved in processing transactions, as well as improve customer service, detect fraud, manage risk, and comply with regulations. Through AptSoft's technology, users can identify patterns in large volumes of transactional data and use that information to respond accordingly.

Yahoo! Reports Revenue, **Upcoming Layoffs**

FOR ITS FOURTH QUARTER, Yahoo! posted revenue that was up 8% over the same quarter the previous year, totaling \$1.832 billion. However, quarterly net income decreased 23% year over year, from \$269 million, or 19 cents a share, in 2006 to \$206 million, or 15 cents per share, in 2007. For its fiscal year 2007, the company reported revenue of \$6.969 billion and profit of \$660 million, or 47 cents per share, down from \$751 million, or 52 cents a share, in fiscal year 2006. Yahoo! also reported plans to cut about 1,000 jobs this month and named Aristotle Balogh as its new chief technology officer.

New SATA Spec In Development

RESEARCHERS FROM the Serial ATA International Organization, Intel, Hitachi, and other manufacturers are working on a new specification designed to eliminate the need for a separate power connection when using external SATA drives, such as hard drives or optical disc drives. The Power Over eSATA specification would instead use a cable designed to gather power from the drive's host system and should be compatible with existing external SATA connectors and maintain the current 3Gbps maximum transfer rate. Researchers expect the specification and related products to be available during the second half of this year.

Dell Completes EqualLogic Purchase

DELL HAS COMPLETED its acquisition of EqualLogic for \$1.4 billion and has also formed an Enterprise Architecture certification based on EqualLogic's channel program. To be certified, partners must pass a course and exam on enterprise foundations, have a business plan template, send at least one person to annual sales training, and buy at least \$200,000 worth of enterprise products annually. Dell will offer certified partners free training in Dell's enterprise products, lead generation, and marketing incentive funds. A number of EqualLogic's partners have shown apprehension about sharing their customers' data with Dell, but Dell said it plans to "preserve and build on" EqualLogic's channel system, which many partners extol.

Firefox Holds Nearly 30% Of European Browser Market

ACCORDING TO FRENCH WEB metrics company Applied Technologies Internet, Mozilla's Firefox Web browser had captured nearly 30% of the browser market in Europe by the end of last year. The company used XiTi Monitor, which is a Web measurement site, to track the use of different browsers in 32 European countries. Among those countries tracked, Firefox had the largest market share in Finland, with Firefox accounting for 45.4% of all browsers used. The rest of the top five countries for Firefox use were Slovenia, where the browser captured a 44.6% market share; Poland with 42.4%; Slovakia with 41.2%; and Hungary with 40.3%.

Palm To Close Retail Stores

In an effort to increase its competitiveness and focus on fewer programs, Palm will close all of its retail stores, including its eight branded shops and 26 stores within Airport Wireless stores. The company says core business initiatives will continue to be its main focus, and the store closings will help it put its resources toward fewer programs. Analysts say the store closings may be part of Palm's plan to cut costs and sell its products through other retail outlets. Palm also canceled the Foleo, a smartphone companion product it had planned to release last year.

Upcoming IT Events

- FEBRUARY -

SCALE 6x - 2008 Southern California Linux Expo February 8-10 Los Angeles, Calif. www.socallinuxexpo.org

. Comptel Plus Spring 2008 Convention & Expo

February 24-27 Nashville, Tenn. www.comptel.org

- MARCH -

Gartner Wireless & Mobile Summit March 3-5

Chicago, III. www.gartner.com/it/summits/ra11/index.jsp

Secure IT Conference

March 4-6 San Diego, Calif. www.secureitconf.com

Cornerstones Of Trust 2008

March 6 Foster City, Calif. www.cornerstonesoftrust.com

Help Desk Institute Conference

March 9-12 Dallas, Texas www.thinkhdi.com/hdi2008 VoiceCon March 17-20 Orlando, Fla. www.voicecon.com

.

Boston SecureWorld Expo March 26-27 Boston, Mass. www.secureworldexpo.com

Data Center World

March 30-April 3 Las Vegas, Nev. www.afcom.com

- APRIL -

FOSE April 1-3 Washington, D.C. www.fose.com

Gartner Business Intelligence Summit

April 1-3 Chicago, III. www.gartner.com/it/summits /bi6/index.jsp **RSA Conference**

April 7-11

San Francisco, Calif. www.rsaconference.com/2008 /US/home.aspx

ASCDI Spring

April 9-12 Key West, Fla. www.ascdi.com

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This information provides a quick glimpse of current and historical stock prices and trends for 15 major companies in the technology market.

Company	Symbol	Year Ago	Jan. 23 \$	Jan. 30 \$	% change from previous week
BEA Systems	BEAS	\$12.78	\$18.40	\$18.61	▲ 1.14%
Computer Associates	CA	\$26.62	\$21.43	\$22.30	4 .06%
Cisco Systems	CSCO	\$27.51	\$24.03	\$24.36	▲ 1.37%
Dell	DELL	\$23.90	\$20.12	\$20.43	▲ 1.54%
Electronic Data Systems	EDS	\$26.54	\$18.22	\$19.58	▲ 7.46%
Google	GOOG	\$467.16	\$548.62	\$548.27	▼ 0.06%
HP	HPQ	\$42.81	\$43.19	\$43.54	▲ 0.81%
IBM	IBM	\$100.38	\$106.10	\$105.65	▼ 0.42%
Intel	INTC	\$21.28	\$19.98	\$20.69	▲ 3.55%
McAfee	MFE	\$29.92	\$30.04	\$33.24	▲ 10.65%
Microsoft	MSFT	\$29.61	\$31.93	\$32.20	▲ 0.85%
Oracle	ORCL	\$17.16	\$20.61	\$20.27	▼ 1.65%
Red Hat Software	RHT	\$22.54	\$17.81	\$18.04	▲ 1.29%
Sun Microsystems	JAVAD	\$6.64	\$14.82	\$17.55	▲ 18.42%
Symantec	SYMC	\$17.78	\$15.26	\$17.05	▲ 11.73%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

PRODUCT OF THE WEEK

A Moveable Chill

Large-Capacity 7.5-Ton Portable Air Conditioners Add Flexibility To Data Center Cooling

by Darrell Dunn

TEMPERATURES ARE RISING in most data centers, and the challenge of keeping vital equipment in operation and ensuring continuous uptime requires flexibility and efficiency. That's particularly true for a growing number of small and medium-sized enterprises that often must deal with physical and site-specific restraints and are finding a new breed of portable air-conditioning units to be an efficient new IT tool for ensuring peak performance.

An air-conditioning specialist since 1979, reseller Atlas Sales & Rentals (510/713-3313; www.atlassales.com) recently began offering new "mega-sized" portable units designed by startup company NorthWind. The units can deliver 7.5 tons of cooling capacity, a third more capacity than possible with the largest portable units previously available on the market. The Kodiak MAC (mobile air cooled) systems from NorthWind (www.nwindinc.com) are "workhorses" that can allow businesses to gain new levels of cooling capacity from a single unit or reduce the total number of units required to cool larger data center installations.

"It's the largest unit of its type on the market," says Clark Michel, vice president



PRODUCT OF THE WEEK

KODIAK MAC9032/9034 FROM NORTHWIND

Description: Industrial-grade, large-capacity mobile air conditioners

Interesting fact: The 7.5-ton portable unit can supply a third more cooling capacity than previously available

(510) 713-3313 www.atlassales.com of Atlas Sales. "This extends the reach and range of what can be done with portable equipment for a market that is rapidly growing and looking for innovative new alternatives. I think it is going to open up the doors for some places that could never seem to get enough cooling within their given floor space."

Portable Cooling Gets More Capacity

Businesses typically utilize portable cooling equipment for primary, supplementary, or emergency cooling requirements. Many small and midsized enterprises are located in leased buildings, and companies are often hesitant to invest in permanently installed cooling equipment. Mobile coolers can provide flexibility in movement of air to specific zones to meet fluctuations in cooling demands or can even be located in rooms outside the data center floor itself.

The MAC9032 and MAC9034 units were created by NorthWind, a company formed in 2006 by executives with more than 70 years of total expertise in the cooling industry. NorthWind was formed in large part with the specific purpose of designing new equipment that could increase cooling capacity available to businesses utilizing portable equipment.

"My partner and I were involved in another cooling company and decided to create this new company so that we could explore exciting new projects like this 7.5-ton unit," says John Spencer, vice president and chairman of NorthWind. "We felt there was a market for larger-capacity equipment and have made it our specialty. Large-capacity portable air conditioners provide flexibility to companies trying to react quickly to new market opportunities, and the mobile units can be moved quickly into position in emergency situations."

The design of the MAC9032/9034 involved more than simply building a bigger piece of equipment, Spencer says. To begin with, the unit needed to maintain a slim profile of 28.5 inches wide that would allow it to easily move through doorways and be placed into elevators for multistory installations.

The units are designed for durability and continuous duty and utilize electromechanical controls that allow users to easily position a unit where needed, plug it in, and turn the thermostat to the desired cooling

level for a "plug-and-cool" experience, Spencer says.

The units are also designed to take the hassle out of removing condensation, as each system includes a high-lift condensate pump with a built-in check valve and safety switch. The NorthWind ACRS (Advanced



Condensate Removal System) eliminates the tedious tasks during a conversion process involving the removal of panels, such as during the changing of tubing and wiring, he says. A simple, 90-degree turn of a diverter valve allows users to switch from pump to tank. The systems also utilize easy-to-clean and UV-protected electrostatic filters in both the condenser and evaporator air stream.

Just The Right Fit

The 7.5-ton cooling units provide businesses a way to work around constraints such as limited access to power circuits. Four of the 7.5-ton Kodiak systems can cool the same amount of equipment as six 5-ton units, allowing businesses to reduce the footage dedicated to cooling units.

"There are a lot of places where you just can't seem to get enough cooling to handle your application load," Michel says. "So many data centers these days just don't have any available floor space to try and cram another cooling unit. With these portable coolers, you can locate the actual unit in a room next door, run the duct work, and set the thermostat to sense the temperature of the room you're trying to cool. It's a pretty simple process."

KODIAK MOBILE AIR CONDITIONER SPECS

Models MAC9032 and MAC9034

- 7.5-ton cooling capacity
- 28.5 inches wide
- 61 inches deep
- 74.75 inches high
- Operating range of 60 to 115 degrees
 Celsius
- Heavy-duty 6-inch wheels with swivel casters, brakes, and rear-wheel swivel lock
- Electrostatic filters
- Electromechanical controls

A growing business may find cooling levels for which their data centers were designed may have worked fine in the beginning, but after two or three years, the addition of a portable and easily installed Kodiak unit can provide a significant boost to those increased cooling requirements, he says.

The MAC9032 and MAC9034 units are equipped with phase protectors to prevent the compressor and blower motors from running backward. Each unit has a power-ready light that will only illuminate when the phase is correctly wired, and it will not start unless the power is correctly phased. The condenser blower is cycled on and off with a pressure switch in the high side of the refrigerant system, preventing large voltage rushes during startups.

The belt-driven blowers deliver great airflow in a rugged system that is remarkably quiet in operation, Michel says.

The MAC9032 is a 208/230-volt, three-phase unit, and the MAC9034 is a 460-volt, three-phase system.

"Reliability, of course, is the No. 1 concern for these units that will be dedicated to protecting the technology assets of our customers," Michel says. "These units have been performance-perfected to deliver the maximum cooling available while maintaining full operational range and utilizing the latest developments in cooling technology."

NorthWind continues to innovate and push the envelope for portable cooling equipment, and later this year, the company plans to introduce large-capacity mobile water-cooled systems that will provide another alternative to businesses with unique cooling requirements, Michel says. In some facilities where running ducts would be difficult or impossible, a water-cooled unit could provide an interesting alternative.

SECURITY FEBRUARY 8, 2008

More Security, Not Resources

Webroot's E-Mail Security SaaS Helps Keep SMEs Safe

EMAIL IS A PRIMARY MEANS of communication in the workplace. It can also be a source of viruses and massive amounts of spam. It takes time and effort to manage unwanted email and can occupy valuable personnel. Webroot's E-Mail Security SaaS (software as a service) provides the means to manage and secure email without the need for additional hardware, software, or manpower.

Benefits of E-mail Security SaaS include low cost, easy implementation, and real-time, ondemand reporting. The service protects against all known viruses and 98% of spam. Support is available 24x7x365 with a 99.999% uptime guarantee.

Features of the service include antivirus and antispam protection, which is facilitated by five best-of-breed engines that detect viruses quickly. Zero Hour filters to prevent exposure while identifying threats and seven different levels of spam protection combine to catch 98% of spam.

With Managed Encryption Service using Transport Layer Security, the service encrypts email at even the desk-to-desk and peer-to-peer levels. Inbound and outbound rules can be set to manage content and event-based email, and rules can be customized for specific occurrences or general traffic flow. The image protection features built into the service specifically target offensive or distasteful images that could find their way to an employee's inbox. Every image is scanned, and if the resulting data matches that of any known salacious images, the email will be logged and either deleted or quarantined.

For the sake of continuity, up to 28 days of inbound and outbound emails will be retrievable from secure, mirrored data. This data can be accessed via Webmail, which allows users to access and send the data from any browser, whether in or out of the office. With the Webroot E-mail Security SaaS, all email is archived in data centers in different geographical locations for recovery in the event of a disaster.

Webroot E-Mail Security SaaS

Standard Bundle: \$2 to \$2.25 per seat per month; Advanced Bundle: \$2.75 per seat per month

Security service that protects a network from viruses and spam while protecting and storing data

(800) 772-9383

www.webroot.com



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STORAGE FEBRUARY 1, 2008

Dell AX4-5: Simple, Scalable Storage

SAN Array Offers Affordable, Easy-To-Use Features



As SMEs grow, they add branches and remote offices, which increase the need for data storage without spending more of the IT budget. The storage therefore must be simple to deploy and easy to manage. To meet the need for entry-level storage for small and medium-sized enterprises, Dell has released the AX4-5 series of SANs.

Data on the AX4-5 is designed to be protected anywhere—in the controller, on the drive, or on the data path. Further reliability is provided through continuous background disk consistency checking; mirrored cache; and cache destaging, which means in the event of a failure, data stored in cache can be moved to disk, protecting against loss or corruption. Deployment and operation are designed for simplicity with the EMC Navisphere Express user interface. For users with multiple EMC arrays, this software offers a "single pane of glass" type of management in addition to data replication and migration tools.

Scalability and flexibility are crucial to the data storage solution of any SME, which is why the Dell AX4-5 is designed with scalable architecture and multiple drive options. The AX4-5 supports up to 60 drives on 64 hosts (which requires five enclosures), and with the EMC Navisphere Express, a user can add additional storage to the array in a short amount of time. Users can start with four drives and continue adding as greater storage needs arise. Supported servers include PowerEdge and PowerVault storage technologies.

The arrays support both Fibre Channel for 4GB architecture and iSCSI for IP networks, as well as SAS and SATA drives. This allows for tiered storage as users have the option of mixing drives to support high-performance needs, such as I/O applications, while using SATA drives for cost-effective storage. As needs arise, the AX4-5 series is designed to migrate data seamlessly and easily between different types of drives and RAID types.

Dell AX4-5

Starts at \$15,699

A storage array that supports up to 64 hosts and up to 60 drives across five enclosures

(800) 915-3355

www.dell.com



PHYSICAL INFRASTRUCTURE

Eliminate Air Recirculation Problems

Upsite Technologies' HotLok Blanking Panel Provides Effective, Durable Seal



KEEPING DATA CENTER EQUIPMENT cool is likely a top priority in your enterprise. And the situation is only going to become more essential in the near future.

One way to help is by preventing recirculation problems from occurring in your IT equipment cabinets with products such as Upsite Technologies' HotLok Blanking Panel. HotLok is an all-encompassing sealing solution for above-the-floor air recirculation problems in IT equipment cabinets.

The patent-pending HotLok Blanking Panel is engineered to provide a highly effective, durable seal. It features cantilevered sealing vanes that eliminate the gap between adjoining blanking panels or with installed equipment. Its ergonomically designed finger grips make tool-free installation and removal easy, safe, and fast.

HotLok Blanking Panels are engineered to stack anywhere in the server room They require no particulate-emitting containers for storage and are made of fire-resistant, recyclable, RoHS-certified plastic.

HotLok Blanking Panels are available in 1U and 2U sizes to fit 19-inch EIA 310-E-compliant mounting rail widths with either round or universal square openings. Each size can be purchased with or without a liquid crystal Upsite Temperature Strip. The Upsite Temperature Strip dis-

plays Celsius and Fahrenheit temperatures. The red, yellow, and blue ranges on the indicator bar demonstrate levels of temperature operation based on ASHRAE and equipment manufacturers' standards for equipment air-intake temperatures.

The HotLok Blanking Panels offer:

- Elimination of exhaust air recirculation within the cabinet, allowing for optimized cooling, lower energy consumption, and reduced operating expenses
- Reduction and stabilization of equipment air intake temperatures
- Reduction of the number and severity of hot spots within equipment cabinets
- Increased equipment availability, performance, and reliability
- Potential for greening of data center

Upsite Technologies HotLok Blanking Panel

An all-encompassing sealing solution for abovethe-floor air recirculation problems in data center equipment cabinets

(888) 982-7800

FEBRUARY 1, 2008

www.upsite.com



STORAGE JANUARY 18, 2008

Enhance Technology Adds To Its UltraStor RS Line

RS16 IP-4 Handles High-Impact, High-Volume Tasks



ENHANCE TECHNOLOGY'S RS16 IP-4, the newest member of the company's UltraStor RS Series of storage products, gives IT departments a host-independent, transparent, and driverless method for adding RAID (0, 1, 3, 5, 6)-protected storage to existing infrastructures, regardless of the operating system or hardware already in place.

Supporting Microsoft VSS (Volume Shadow Copy Service) and coming in a 3U, 16-disk modular rack design, the RS16 IP-4 offers such features as a built-in 64-bit RAID controller, up to 2GB of cache and 3Gbps SATA disks. Advanced features available via the RS232 interface include multiple array settings; such iSCSI parameters as connection mode, ID, and LUN mapping; and SNMP and security options.

Constructed to handle high-volume and high-impact network storage tasks, including those related to video broadcasting and backup and recovery applications, the UltraStor RS16 IP-4 also includes an ability to let administrators configure the appliance in just minutes. Additionally, auto-configuration abilities are available via a rear-located LCD control panel, and remote Web browser-based management and monitoring are also possible. An

included menu screen allows access to set up the RS16 IP-4's configurations, as well as change settings as storage needs change over time. Physical protection comes in the way of two included redundant, hot-swappable power supplies and two fans to guard against hardware-failure interruptions.

Beyond the inclusion of quad GbE (iSCSI) ports, the RS16 IP-4 also includes N-Way Mirror and enterprise-class Snapshot for point-in-time recovery protection against accidental deletion of data. Additionally, the appliance is suitable for Microsoft Exchange and SQL Server environments, as well as disk-to-disk backup, database pools, image acquisition, near-line storage, data centers, media and asset libraries, and shared SAN networks. Further, dynamic online RAID expansion is possible without total system downtime being required.

Enhance Technology UltraStor RS16 IP-4

\$4,750

An intelligent iSCSI RAID system that includes a 64bit RAID engine and up to 2GB of cache and supports 3Gbps SATA disks

(562) 777-3488

www.enhance-tech.com



Physical Infrastructure

JANUARY 18, 2008

CPS Automatic Power Cycle Keeps Equipment Online

New Device Automatically Power Cycles Frozen Devices



WHEN IT COMES TO appliances that control network traffic, ordinary monitoring tools aren't enough. Sure, the monitoring system alerts you to traffic disruptions, but the entire network remains down until you're able to reach the frozen router or modem and restart the power cycle. To speed up the process, CPS (Computer Peripheral Systems) offers the APC (Automatic Power Cycle) appliance, which monitors network status and automatically restarts power to a frozen device, making the hung router a minor annoyance instead of a major downtime problem.

CPS built the APC unit with DHCP routers and modems in mind for plug and play applications, but customers can use the device to cycle power for any critical network component. The APC unit sits between the AC outlet and the selected devices, such as a router or modem. It regularly pings two IP addresses to confirm that the network's Internet connection is functioning. When the APC unit determines that a device has frozen (due to ping failure for both IP addresses), it automatically recycles power to its AC OUT outlet for five seconds.

Customers can configure multiple APC unit features by connecting the device to a

PC (via a RS-232 serial adapter). The PC must run a terminal emulation program, such as Hyper Terminal or ProComm. You can change the primary and secondary ping addresses, enable or disable ping-out capabilities, change the ping interval from its 2-minute default setting, or extend the power-off countdown from the default five seconds up to 90 seconds

The APC unit also supports out of band backup with its Ring Reboot feature. Customers can ring the APC device over a DSL or phone line to initiate a power reset. The APC device resets after six rings by default, but customers can change the ring number via the unit's serial connection.

The APC appliance is small and light. It has two AC receptacles (one IN, one OUT), one RJ-45 port, and three RJ-11 ports. The device also sports a Power/Reset button and a rocker for the 15-Amp circuit breaker, as well as status LEDs. The device supports 110VAC to 240VAC power inputs.

CPS Automatic Power Cycle

\$179

Resets AC power to hung DSL routers, modems, and other devices

(800) 888-0051

www.cpscom.com

Computer Peripheral Systems, Inc.

PHYSICAL INFRASTRUCTURE

OCTOBER 26, 2007

A Master Enterprise View

New ATEN KVM Bundle Provides Perfect Features For Monitoring & Maintaining Servers & PCs

TODAY'S DATA CENTERS require convenient, space-saving, streamlined KVM equipment. ATEN's 17" Single-Rail LCD Integrated Console and MasterView KVM bundle is designed with those needs in mind.

ATEN's economy LCD KVM console, CL1000M, integrates a keyboard, 17-inch LCD, and touchpad in a 1U Slideaway housing. Setup is fast and easy. There is no software to configure, no installation routines, and no incompatibility problems. Slide the console module section out and flip up the cover, and you are ready to work.

When finished, flip down the cover and slide the console module back into the rack.

By using the CL1000M to manage your installation, you save space; eliminate the expense of having to purchase a separate keyboard, monitor, and mouse for each PC if attaching to a KVM switch; and can take advantage of

upgrading your current system ATEN is now bundling the CL1000M with an eightport MasterView Plus, which

helps reduce the need for redundant hardware. With the MasterView Plus, you can control up to 512 computers with a single keyboard, monitor, and mouse. And it requires no software.

MasterView Plus is more than a simple eight-port KVM switch. A built-in Auto-Scan mode lets you monitor every attached computer for a specified amount of time, while the on-screen display lets you assign a

> unique name to each computer and access it via a slick, menu-driven interface. A Quick View Scan feature makes it easy to monitor selected PCs, and hot-pluggable



capabilities mean you can add or remove PCs for maintenance without powering down the switch. The MasterView's 1U, 19-inch rack-mountable casing and status-monitoring LEDs make it ideal for server rooms or other multicomputer environments.

ATEN 17" LCD Integrated Console & MasterView KVM (model CLCS9138MKIT)

Includes an eight-port KVM switch and a KVM console with a keyboard, 17-inch LCD, and touchpad

(888) 999-2836 ext. 3100

www.aten-usa.com/CLCS9138MKIT



SECURITY

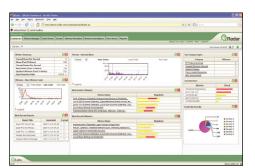
JANUARY 25, 2008

Q1 Labs Upgrades Network & Security Monitoring Platform

QRadar Offers Enhanced Visibility, Log Management & Analysis

In TODAY'S ENVIRONMENT, network security, compliance, and event management are of paramount concern. Thankfully, the latest version of Q1 Labs' QRadar addresses those concerns in spades. QRadar is a dual Network Behavior Analysis and Security Information and Event Management platform designed for those seeking to take greater control over their network security.

QRadar delivers network insight and security monitoring capabilities from a single unified infrastructure. QRadar collects



QRadar's Dashboard tab provides an at-a-glance overview of the status of the network.

data and live network behavior information from sources such as NetFlow, all network-attached security devices, applications, and OSes. QRadar then employs security event correlation and network behavior analysis to sift through that data and produce the most pertinent set of actionable data, which network admins can use to make informed decisions at a moment's notice.

QRadar displays network behavior via its flow viewer. The log management and behavior analysis architecture is ideally suited to the task of monitoring the network and alerting admins to any and all threats, users, hosts, and assets accessing the network. QRadar's unified design also lets users monitor their network and security infrastructure from a single easy-to-use interface.

QRadar new 6.1 lets users search network flow to improve network behavior

analysis and security forensics results. Another new feature is the QoS monitoring capability for critical network apps such as VoIP. QRadar 6.1 also features augmented host discovery, asset-based alerting, tamper-proof logs in storage, and event and network flow data.

Q1 Labs QRadar 6.1

Starts at \$39,900; free upgrade to current users

Q1 Labs' network behavior analysis, log management, and security event management platform

(781) 250-5800 www.q1labs.com

JANUARY 25, 2008

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The Nexus of Security and Networking

STORAGE

Secure Database Backup

Acronis Recovery Makes It Easy To Back Up Your MS SQL Database

EVERY COMPANY MUST ensure that its database backups meet regulatory requirements while also being easy to manage, maintaining space efficiency, and retaining the ability to be restored quickly if needed. Acronis Recovery for MS SQL Server helps companies meet these requirements.

Recovery gives IT managers and database administrators the ability to securely back up and recover databases, including tables, logs, and other components. It has the ability to recover from a point just before a failure or disruption without loss of work, enabling business functions to be restored without significant disruption.

Key features include:

Wizard-driven management console. This console makes the product easy to use, even for those without extensive

database administration experience. A wizard guides you through the scheduling process to reduce the possibility of errors. The Management Con-sole also provides centralized management by automatically discovering all database servers and displaying them with status information.

Smaller archives. Acronis Recovery can create backup images that are up to 90% smaller than the original databases.

Differ-ent compression levels are available to allow you to optimize for faster performance, smaller size, or a balance of both.

Encryption. For added security, Recovery uses industry-standard encryption technology; AES is available with three key

lengths: 128, 192, and 256 bits.

Resource management. Companies can allocate CPU and bandwidth resources during the backup process to keep the process transparent to users.

Disaster recovery plan. Administrators can create and email disaster recovery plans that include step-by-step instructions for recovering database information. With these instructions, staff—even those with-

out database administration skills—can restore databases quickly.

FTP support. For even greater peace of mind and security, Acronis Recovery for MS SQL Server lets companies back up database images offsite via FTP.

Acronis Recovery for MS SQL Server

\$499 per server

Gives companies the ability to recover a database to a good configuration in minutes

www.acronis.com

(877) 669-9749



NETWORKING & VPN
October 26, 2007

Acronis' Recovery

Improve Application Delivery

A10 Networks' AX Series Next-Generation Server Load Balancer Provides Industry's Best Price/Performance

Two AX SERIES switches from A10 Networks are designed to provide reliable, cost-effective application-delivery platforms.

A10's AX Series is the industry's best price/performance advanced traffic manager, helping enterprises maximize application availability through a scalable, high-performance application delivery platform.

The AX's ACOS (Advanced Core Operating System) architecture is revolutionary by market standards because of its native multisystems support, which



includes an optimized multi-CPU architecture built from the ground up designed for performance, scalability, and reliability.

The AX's ACOS architecture scales performance across multiple decoupled CPUs and specialized programmable ASICs linearly to ensure maximum scalable performance, including when all of the features are turned on. The AX Series' aRule Advanced Scripting technology provides ultimate policy creation flexibility to deliver rich traffic inspection and switching capabilities, helping organizations adapt to everchanging conditions and application types.

The end result is a switch with uncompromised performance even when all features are turned on, which helps organizations reduce data center power, server, and rack space requirements. Plus, all features are included in the standard list price.

The two newest AX Series appliances, 2000 and 2100, are 2U appliances designed for enterprise data centers and server farms. The AX 2000 has two CPUs, 2GB of memory, eight Gigabit over copper ports, two G small-form factor pluggable fiber ports, and an 80GB hard drive. The AX 2100 has

those same components, plus an additional two CPUs and two G small-form factor pluggable fiber ports; the 2100 also has dual 80GB RAID 1 hard drives.

All AX models feature carrier-grade hardware, the industry's best SSL and Layer 4-7 price/performance, support for IPv4 and IPv6, and an industry-standard command-line interface and easy-to-use GUI.

A10 Networks AX Series

The AX Series is the industry's best price/ performance next-generation server load balancer

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www.a10networks.com/processor



Better Manage Your Wireless Network

Experts Weigh In On Improving Efficiency

by Elizabeth Millard

WLANS ARE POPPING UP at companies of every size, whether it's a large-scale rollout or just a few APs (access points) that cover conference rooms and other meeting areas. Many times, implementing the technology is the easy part, followed by the challenge of actually managing the wireless implementation. Here are a few tips to make management more effective.

Opt For A Single Vendor

Some wireless setups are created gradually, resulting in a mishmash of different products, particularly if managers choose and plug in access points at branch offices or administrators employ them temporarily for conferences. But for more comprehensive wireless coverage, enterprises should research which vendor will suit their needs and go with one that can help them scale. Not only is this advantageous in terms of support, but the strategy also ensures that a vendor will lend expertise with management issues.

"Organizations should look for a single wireless infrastructure that will provide facility-wide coverage for a full spectrum of wireless applications and services," says Lou Martinage, director of marketing and business development at MobileAccess (www.mobileaccess.com). "These can include cellular services from multiple

Most Useful Long-Term Step: Get User Feedback

During WLAN rollouts, a company should determine whether the user experience is positive or negative by reviewing cumulative wireless metrics and other network performance variables, notes Thompson. "By evaluating WLAN setups and overall link utilization, you can judge overall network performance and quickly make necessary adjustments during implementation," he says. By continually monitoring wireless network performance and establishing benchmarks, a company can define acceptable performance levels and know quickly when that performance dips below those levels.

wireless operators and also Wi-Fi, public safety services, and more."

Check The Delays & Dead Spots

Although many IT managers have noted that there are few, if any, tools that can effectively manage both wired and wireless at the same time, there are ways to get a picture of overall network health by doing network emulation regularly. Checks that can simulate delays can gauge bandwidth and find areas of dropped packets throughout the network and can check both wired and wireless configurations.

Vendors such as Anue Systems (www.anuesystems.com), Shunra (www.shunra.com), PacketStorm (www.packetstorm.com), and Simena (www.simena.net) have products that can check the effects of delay and limited bandwidth on applications and overall network health. For example, the Anue Systems Network Emulator does wireless WAN testing by modeling delay, jitter, and errors dynamically, as they would occur on an actual wireless network, by using a wired test bed.

AirHORN, from network performance company Nuts About Nets (www.nutsaboutnets.com), can be used to locate dead spots in wireless coverage by acting as a source of transmission, simulating 802.11 traffic on each of the 11 Wi-Fi channels, notes Steve Leytus, a developer

and senior software engineer at the company. To work, AirHORN is placed in a location adjacent to the AP and begins transmitting. Using the company's AirSleuth spectrum analyzer on a laptop, a technician moves around a facility and can see the transmission peaks. "As he or she enters a particular office, the peak might drop off," Leytus says. "Turns out that office is next to a water heater, for example, or some other metal structure that absorbs radio frequency energy, which explains why that office has poor wireless performance." The technician can then relocate the access point for better coverage.

Invest In Management Tools

Also crucial is monitoring in real time and resolving issues in remote locations or branch offices without having to send a



network administrator to the site, notes Rachna Ahlawat, vice president of strategic marketing at Meru Networks (www.meru networks.com).

Wired LAN management requires managing infrastructure components such as switch port configuration, but wireless

LAN management folds in RF components, which have unique challenges in terms of coverage gaps and consistent performance.

"Enterprises should look for management tools that provide a rich real-time network dashboard to capture overall network health and show network managers statistics not only on a system level but also by access point, user, and device," says Ahlawat.

> She adds that these tools should also have visualization capabilities that let administrators remotely view radio frequency coverage and performance, which will optimize network operations and save on "truck rolls" used by telecom providers to determine wireless levels.

Determine Your Diagnostic Tool Needs

Two categories of tools—Wi-Fi scanners and 2.4GHz spectrum analyzers—are available for helping an enterprise choose the best Wi-Fi channel for a wireless network, notes Leytus.

In the arena of Wi-Fi scanners, the best-known product in the category is NetStumbler (www.netstumbler .com), Leytus says, a tool that will report the SSID (Service Set Identifier) for every access point it detects, along with the channel the AP used. But these tools may be limited in their capability because APs might have interference from RF energy sources such as microwave ovens, and some scanners won't be able to tweeze apart which RF signals are from tech devices and which are from other sources.

A spectrum analyzer is the instrument of choice for detecting and identifying sources of RF interference, adds Leytus. "They give you a better picture of the RF environment to help identify and find devices interfering with your WLAN." Typically, they'll employ a two-dimensional display, where

the vertical axis represents the magnitude of a signal, and the horizontal axis represents the frequency.

Dedicated hardware spectrum analyzers can be very pricey, Leytus says, but PC-based analyzers are on the market at more affordable rates.

Best Way To Think Ahead: Conduct A Wireless Site Survey

According to Charles Thompson, manager of sales engineering at Network Instruments (www .networkinstruments.com), the more you know about your network, the better prepared you are to properly integrate wireless. Site surveys, which consultants or vendors can do, can help

a company understand how the WLAN will perform and how access points should be positioned. Thompson says, "Wireless site surveys can also indicate neighboring traffic that may interfere, environmental issues, and other potential obstacles."

CLIENT SOFTWARE

November 16, 2007

Instantly Search Terabytes

dtSearch Can Scan Terabytes Of Data In A Variety Of Formats

TODAY'S ENTERPRISES are filled with vast amounts of data in a variety of formats in seemingly endless numbers of locations. Finding the information you need can be daunting, which is where programs such as those from dtSearch can be essential.

dtSearch can instantly search terabytes of text because it builds a search index that stores the location of words in documents. Indexing is easy: Simply select folders or entire drives to index and dtSearch does the rest. dtSearch automatically recognizes and supports all popular file formats and never alters original files.



dtSearch can also create (and search with a single request) an unlimited number of indexes. Since you may want to search files that dtSearch has not indexed, dtSearch also does unindexed, as well as "combination," searching. All dtSearch products can index more than a terabyte of text in a single index and create and search an unlimited number of indexes. Search time is typically less than a second, even across terabytes of data.

Along with the terabyte indexer, all dtSearch products include more than two dozen indexed, unindexed, full-text, and fielded data search options; support for hundreds of international languages; display of Web-ready content with highlighted hits and all images, links, and formatting intact; built-in HTML converters for hit-highlighted display of other popular file types; and distributed or federated search options, with display of local and remote content.

The dtSearch product line also embeds the dtSearch Spider, providing support for public sites, secure content HTTPS, password-accessible sites, and forms-based authentication; searching of static and dynamic content; and relevancy-ranking of spidered and non-spidered content.

The dtSearch Engine lets C++, Java and .NET developers add dtSearch terabyte indexer and file format support to Webbased and other applications.

dtSearch

Instantly searches terabytes of data, in a variety of formats, across a desktop, network, Internet or intra-net; new release offers 64-bit developer API access

(800) 483-4637

www.dtsearch.com



Build A Better Wireless Shield

Continued from Page 1 perimeter defenses, and incident detection tools will be added," Takanen says. "However, it is very important to understand that many of these tools do not add security but enable you to catch an incident after the fact. After the network is deployed, it has to be audited."

Conduct A Survey Before Implementation

Although it's an easy step, many enterprises deploy wireless access points without conducting a proper survey, explains Jose Ferreira, senior security architect at Forsythe Solutions Group (www.forsythe.com). Although they might ensure they have adequate coverage within their buildings, they might not realize that their signals could be propagating hundreds of feet, in turn reaching outside the walls.

Best Tip: Safe Access

Both physical and logical access are primary targets when looking to lock down wireless networks, and Jose Ferreira, senior security architect at Forsythe Solutions Group (www.forsythe.com), offers suggestions for addressing both. When deploying wireless access points, he says, enterprises should ensure that they're in secure or other difficult-to-reach locations to prevent unauthorized physical access and the resetting of the devices to default—and insecure—configurations.

On the logical access side, Ferreira recommends segmenting the wireless access so it doesn't have direct access to the internal network. "The wireless network needs to go through a firewall to provide appropriate restrictions to the internal network and make it a little more difficult if the wireless network is compromised," he says.

"Place access points more toward the interior of the building and not toward the exterior walls or windows," Ferreira says. "If you need to place access points closer to the exterior walls or windows, reduce the signal strength settings so that the wireless signal won't transmit so far. Restricting wireless signals to the interior of a facility will make it more difficult for malicious users to attempt unauthorized access."

Use A Common Framework For Wired & Wireless

HP's Sanchez says it makes sense to use a common security approach for both wired and wireless networks. "Having a common approach between both types of networks reduces the headaches of having to deal with two different policies, capabilities, [and] management platforms, all of which increase the administrative burden," he says.

Implement An Adequate Logging Solution

Administrators of wired networks are usually intimately familiar with logging techniques for wired networks, but they shouldn't shy away from the practice when it comes to wireless networks. Dave Westgard, a computer forensic consultant with LuciData (www.lucidatainc.com), notes that most WAPs (wireless access points) are capable of generating SYSLOG messages and will transmit these messages across the corporate network to an inexpensive SYSLOG server.

"Make sure logging is set to an appropriate level," Westgard says. "Too high, and it will generate excess data, making it difficult to sort through while investigating any incidents. Too low, and you may not get the entire picture. Archive your log files in case you need to go back in time and review a previous day's or week's activities."

Ferreira adds that if a company is using a central log repository such as SEIM or SYSLOG, the logs should be redirected to that system. This way, if an incident occurs, administrators can conduct forensics to determine what happened and prevent it from happening again.

But it's important to remember that complexity isn't always a good thing. "Choose tools that give you meaningful, useful information and visibility and that are no more complex than they have to be in order to produce the desired result," says Abdul Karmach, director of technical services at Cyberoam (www.cyberoam.com). The same goes for operational procedures, as well. Tools and processes that are overly complex are the first to be inadvertently overlooked."

Be Smart With Encryption

It's no secret that most wireless access points ship with default configurations that are frightfully insecure. However, it's not enough to simply enable encryption because not all encryption is built the same. Forsythe's Ferreira recommends skipping WEP (Wired Equivalent Privacy) and going straight for the bigger guns.

"WEP is not strong enough—it can be broken in relatively no time. Use WPA/WPA2 using either TKIP or AES encryption. In past years, using WPA was difficult because wireless cards on laptops and [desktop] systems did not support it. But since 2003, WPA has been a standard, so

all wireless cards now support it. If you come across a card that does not, replace the card and do not remove or reduce the encryption strength," Ferreira says.

Michael Tennefoss, head of strategic marketing for Aruba Networks (www.aruba networks.com), adds that enterprises should use client-to-core encryption to ensure the integrity of the data and "to eliminate exposure of encryption keys that could jeopardize security."

Conduct Frequent Audits

Conducting an audit of a wireless network's security only after it's installed and configured isn't enough. Westgard recommends using scanning devices or software specifically written for auditing to conduct frequent audits of AP radio signals. "Scan for authorized and unauthorized wireless network signals. Ask yourself if it is feasible or responsible to let your audit teams employ commonly available, open-source software to duplicate the tools and methods used by potential unauthorized users," he says.

Rob Lelewski, also a computer forensic consultant with LuciData, adds that an effective security measure is changing the ID of the network. "If I'm trying to break into the wireless network of Company X, it is very easy to find it if they name their network 'Company X.' Obviously, I know which network to target. Sounds simple, but you would be surprised at the number of networks that identify where they lead to."

Biggest Timesaver: Bypass MAC Filtering

Although it was once considered a wise idea for wireless security, MAC filtering has lost its luster, and some experts recommend bypassing it altogether. "Filtering MAC addresses does not provide much security nowadays," Ferreira says. "If an intruder is monitoring your wireless

traffic, they can see what the MAC addresses are and be able to spoof them as their own, so it defeats the original intent. It then just becomes a hassle for the administrators to enter a new device every time someone wants access to the wireless network."

Improve Network Monitoring

Continued from Page 1

Bihary, managing director of the Americas at Network Critical (www.criticaltap.com), "The replacement of SPAN is a requirement when real access is required for a 100% view of the traffic on a network segment."

According to Network Critical, administrators should return to using TAPS (test access points) for 100% views of network traffic, especially at speeds of 10Gb and faster. This is because at those bandwidths, routers and switches must now replicate/mirror gigabit quantities of data. (For example, a full-duplex 10Gb link means 20Gb of potential data to replicate/mirror.) This can severely impact the switch/router's ability to perform its primary function while replicating/mirroring packets for SPAN analysis.

But, the role of SPAN is still important with network monitoring. Jim McQuaid, director of product management at NetQoS (www.netqos.com), says SPAN remains a key point of access for both monitoring and analysis. However, as network media moves to higher and higher bandwidth, he notes, the value of SPAN does not change, but the probability of overloading SPAN ports rises somewhat. So, he says, devices that access packet flows via SPAN must continue to be as high performance as possible to keep up.

Enhancing Network Monitoring

So, how should administrators enhance their network monitoring capabilities? Mark Urban, director of product marketing at Packeteer (www.packeteer.com), says administrators should strive to be both proactive and to examine performance at the application and user level. For example, he adds, administrators should get an application view for network monitoring, study user response times, and use monitoring to assess needs when looking at new projects.

The design and placement of permanent access points with enterprise tapping solutions is one of the most important aspects of network monitoring, says Network Critical's Bihary. Bihary likens network managers to physicians who rely on complete problem disclosures to make diagnoses; for the network professional, full disclosure comes in the form of permanent, 100% access to the network. But, he warns, many enterprise managers are still relying on access techniques that drop monitoring frames, groom errors from appearing in traffic, cause latency, and may even present kill points.

Lerner cites three elements that are key to successful monitoring deployments: the adoption of an automated monitoring approach, the consideration of all IP-attached devices, and the leveraging of industry standards. In addition, says Lerner, admins should avoid deploying "heavy" agents that consume resources, cause instability, and require frequent patches and upgrades. Other pitfalls include adopting "mega-suites" that claim to perform a smorgasbord of IT functions and the inability of IT administrators to present

system performance and service-level agreements from a business perspective.

Increasingly, responsibility for application delivery to end users is falling on the shoulders of network professionals, notes NetQoS's McQuaid. So, to take control of network performance, administrators should focus on three primary goals, he adds.

First, administrators should take stock of the infrastructure by identifying all of the critical applications supported by IT, the infrastructure components that support these services, and the bounds of acceptable performance from the end-user perspective. Second, administrators should get timely and actionable information to the right people by establishing processes that alert the right personnel about performance and infrastructure problems. Finally, says McQuaid, it's necessary to continuously measure performance against agreed goals, identify the root causes of any deficiencies, and provide usage data for promoting efficient use of resources.

At the end of the day, says Network Critical's Bihary, administrators should focus on the basic framework for network monitoring, which consists of three elements: access, capture, and analyze. Administrators should provide 100% access to all network traffic,

should capture 100% of the data, and should analyze traffic with the required network appliances, such as analyzers, probes, IDS/IPS, and lawful intercept.

Bihary extends the physician analogy by providing an example of a doctor who is unable to make an accurate diagnosis for a patient over the phone because the phone reception goes bad and the physician only hears half of the symptoms. IT managers who need to accurately troubleshoot network issues must have access to 100% of the network traffic they are monitoring in order to properly assess issues and solve problems.

Network Monitoring Grows Up

As network bandwidths grow, the issues of scalability and performance will begin to significantly impact the ability of modern network monitoring tools, especially those that use SPAN, to provide the valuable information administrators need to properly diagnose and eliminate problems. These tools will also need to evolve, perhaps beyond the use of SPAN, in order to continue providing significant value. In an age when network administrators are tasked with guaranteeing topnotch application performance, network monitoring is more important than ever.

Network Monitoring Products

Company/URL	Product	Description
CITTIO www.cittio.com	CITTIO WatchTower	A network monitoring software system that automatically discovers and monitors existing and new devices using CITTIO's Automation Stack
NetQoS www.netqos.com	NetQoS Performance Center	Uses a Web-based console to present end users with various critical monitoring metrics, including application response times, network traffic analysis, and device performance management
Network Critical www.criticaltap.com	CriticalConneX System ConneX Chassis	A modular enterprise chassis system capable of governing the many-to-many network monitoring connections enterprise systems depend on
Packeteer www.packeteer.com	PacketShaper	An all-in-one suite that provides monitoring, management, shaping, and acceleration in networked environments

Buying Wireless Networking Equipment

Get The Most Out Of Your Next Purchase

by Kurt Marko

WHEREAS WIRELESS NETWORKING was once considered a convenience requiring justification via often-convoluted ROI calculations, it's now a necessity in many companies. Paul DeBeasi, senior wireless analyst at Burton Group, says the need for a financial, business case justification for wireless is less and less relevant because wireless "is like a tsunami that's already hit." He says that for most IT managers, "it's not a question of should we do wireless, but how much."

According to Pat Izzo, LAN/WAN specialist at CDW, the primary concerns of businesses when deploying wireless infrastructure are connectivity and security. For those planning a new wireless network or upgrading existing infrastructure, experts offer some solid advice to ensure a reliable and secure solution.

Evaluate Your Vendor's Viability

The wireless hardware market is still relatively young and dynamic, with many small companies fueling both innovation and competitive pricing. DeBeasi finds that the industry goes through waves of consolidation via acquisitions, the last occurring in 2004 to

Best Tip: Consider The Overall System Architecture

Paul DeBeasi, senior wireless analyst at Burton Group, notes that wireless vendors have two distinct system architectures: centralized and distributed. The centralized approach uses so-called thin APs (access points) with limited local intelligence and route all traffic back to central switches and controllers. This serves to consolidate traffic management, security, and routing on fewer devices.

A distributed architecture incorporates more sophisticated APs that offload some traffic management, even performing wireless mesh switching. DeBeasi says each has pros and cons, with the consolidated approach generally easier to manage, while the distributed architecture is more scalable as traffic increases. He suggests asking vendors about their architecture and the rationale behind their design decisions.

2005, and he believes it is on the verge of yet another round. He notes that two of the industry's big players, Cisco (www .cisco.com) and Aruba Networks (www.arubanetworks .com), have already been active gobbling up smaller wireless companies but that other mainstream network equipment manufacturers, such as Extreme Networks (www.extremenet works.com), will likely use acquisitions to enter the wireless market. He stresses that buyers need to consider whether a potential vendor will still be around in a few years, and if leaning toward a smaller player, the likelihood that it will be absorbed by a bigger fish trying to fill out its product portfolio.

Get A Site Survey

Because the primary goal of a wireless LAN is ubiquitous network access from anywhere in an office, optimal AP (access point) placement is critical for adequate radio coverage. Izzo says that while very small offices with only two or three APs can usually wing it using a little common sense, larger facilities, particularly those with unusual building layouts such as warehouses, hospitals, or classrooms, can benefit from a professional site survey. He says it's important to get someone who understands radio technology and has the proper equipment and software to measure signal strength and propagation. A site survey can also point out the need for specialized external antennas to reach particularly troublesome or isolated areas.

Keep It Secure

IT managers are well aware that they must think twice before connecting APs to their network. However, it's confusing to know exactly what security measures to take, given the plethora of options.

CDW's Izzo recommends four basic steps to securing a Wi-Fi installation. First, use MAC address filtering to allow only registered wireless clients to connect. While this can be spoofed, it's still an easy preventive measure. Second, for even greater control, he suggests using static IP addressing for all connecting devices. Third, Izzo recommends enabling strong data link encryption—WPA (Wireless Application Protocol) or WPA2, not their weaker, easily cracked cousin, WEP (Wired Equivalent Privacy). Finally, he suggests controlling access with an authentication protocol such as LEAP (Lightweight Extensible Authentication Protocol) or PEAP (Protected Extensible Authentication Protocol), using a backend RADIUS server to manage user accounts and credentials.

Izzo feels these should be adequate for most enterprises; however, for even greater protection, he recommends augmenting the login process with a two-factor authentication system, such as a USB hardware token or SecureID one-time password.

Don't Forget About Network Management

Mark Tauschek, senior research analyst at Info-Tech Research, feels that there aren't many technical differentiators between wireless vendors because the underlying technologies are standardized, and the Wi-Fi Alliance certifies product interoperability. One area where he does see significant differences is in management software. Burton's DeBeasi concurs and advises that the best way to evaluate management platforms is with a demo, or better yet, a live trial. He says customers should look at how easy the product is to use and what management and monitoring features are supported and also assess how much staff training will be required to effectively use the product.

DeBeasi notes that each vendor's soft-

find it easier to integrate and operate wireless products from the same vendor.

Consider Mesh Technology

Traditional wireless networks use a huband-spoke topology where each AP has a wired backhaul connection to a central switch. Mesh networks eliminate the need for each AP to have a wired data connection

> (although they still require power) by relaying data wirelessly. Mesh was originally developed for outdoor, metropolitan networks; however, it can be very useful in extending networks to physically isolated locations, says DeBeasi.

DeBeasi says there are two categories of mesh technology. Simple meshing, known as WDS (wireless distribution system), is a standard most vendors support that essentially turns an AP into a repeater. More complex meshing techniques can extend access over a wider area; however, they use proprietary signaling or routing protocols that aren't interoperable among vendors. These are primarily useful for outdoor or metropolitan networks, according to DeBeasi, who adds that WDS is adequate for most enterprise scenarios.

Investigate Automated Radio Management

It's important to maintain excellent reception under varying RF conditions. Tauschek says most products offer some ability to automatically and centrally manage AP radios, so-called RF control. The basic idea is to allow the wireless controller to automatically adjust radio power or channels to avoid interference between APs and to prevent connection drops when clients move from one AP to another.

Potential Gotcha: Ensure Adequate Power To 11n APs

When deploying 11n, realize that current APs, particularly those with dual 2.4GHz and 5GHz radios, are more power-hungry than their 11g counterparts. As such, they can easily overwhelm the capacity of PoE switches. If you are using PoE to minimize wiring to far-flung APs, look at the power specifications before buying to determine if they're within the PoE budget. If the AP exceeds what PoE can supply, most will attempt some form of graceful performance degradation, whether by turning off one of two 11n radios, switching one radio to 11g from 11n, or turning off one of the antennas. Buyers need to assess whether the performance loss is worth the convenience of PoE wiring.

ware typically only works with its own products and may have limited monitoring functionality. Tauschek adds that companies that have standardized on wired switches from one of the major vendors such as Cisco or HP ProCurve (www.hp.com) will

PHYSICAL INFRASTRUCTURE

NOVEMBER 30, 2007

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Providing Guests Wireless Access

Best Practices For Extending An SME Network To Visitors

by Tim Warner

IN TODAY'S HYPERCONNECTED world, many small to midsized enterprises find it advantageous and even necessary to offer

their employees and guests WLAN access. Although wireless authentication and encryption protocols such as IEEE 802.1X, WPA (Wi-Fi Protected Access), and PEAP (Protected Extensible Authentication Protocol) protect logon credentials and company-confidential data as it travels over the airwaves, the question remains: How can data center managers provide limited wireless access to their site contractors or visitors in a secure manner?

Fundamentals: Security & **Scalability**

ProSys Information Systems' (www.prosysis.com) systems engineer Michael

Nordhoff cites security and scalability as the two key issues facing data center managers when they consider how to implement wireless guest network access. "Any viable solution should easily scale to support a single site or an entire enterprise, as well as everything in between," says Nordhoff.

ager's wireless guest access solution should be secure enough to guarantee guest user traffic doesn't co-mingle with

In addition, Nordhoff notes, the IT manprivate user traffic, including in distributed



environments where guest users are located at remote sites and the Internet connection is provided at a centralized data

Nordhoff adds, "A wireless guest access solution should provide the capability to integrate with a back-end user database where user credentials and network access

small, medium, and enterprise wireless networks that offer both wireless and wired guest network access."

can be managed or, alternatively, can support the creation of temporary user ac-

counts in a local database. These accounts

can then either be disabled manually or [set to] automatically expire after a preconfig-

Nordhoff explains that an effective

wireless guest access solution would also support a feature whereby a receptionist or

other lobby ambassador can access the

system to create and manage those user

accounts. In this manner, the solution

would be both flexible and easy to admin-

address these concerns, Nordhoff recom-

mends Cisco hardware. "Cisco's Unified

Wireless Network solution provides excep-

tional features and value for implementing

With respect to specific technologies that

ured time interval."

Other competitors in the WLAN controller marketplace include Aruba Networks (www.arubanetworks.com) and Trapeze Networks (www.trapezenet works.com). See the "WLAN Controller

Product Roundup" sidebar for additional options.

Suggestion: Wireless Access Controllers

"I think the biggest challenge to offering guest wireless access is, of course, security," says Tony Trumbo, director of technology at Ensworth School in Nashville, Tenn. "Guests or visitors usually require Internet access. Therefore, we would like to provide that while simultaneously protecting our internal network resources. Obviously, this puts some administrative work on the IT manager's end, but as a school we have a number of visitors, and providing them guest wireless access is essential."

At Ensworth School, Trumbo opted to deploy dedicated hardware to administer wireless security on the campus internet-

> work. "I believe that the use of wireless LAN controllers with Web-based authentication is the best way to go, at least for us," Trumbo says. "This solution allows for quick setup of guest access (and revocation), as well as for management of wireless access for our general user population."

> Trumbo and Nordhoff agree that wireless guest access is best provided by a solution that leverages single or multiple WLAN controllers to manage both local and remote wireless access points and clients. These WLAN controllers should be capable of build-

ing and maintaining a secure tunnel to one or more other WLAN controllers in a DMZ where guest user traffic can be forwarded directly to the Internet after passing through a policy enforcement device such as a firewall.

"This type of solution mitigates the need to provide special security and/or routing policy for guest user traffic over a private WAN," Nordhoff says. "Ideally, this solution would also support wired guest access so as not to force the network or data center manager to implement a separate, parallel solution."

Moreover, having a technology platform in place that allows monitoring of the wireless network is essential. You can use appliances such as AirDefense Enterprise (www.airdefense.net) or AirTight SpectraGuard Enterprise (www.airtight networks.net) to obtain a quick view of how many guests are on the wireless network at a given time. Also, the intrusion detection system modules included in these products can alert you if something seems amiss; you can then revoke access to the WLAN immediately in order to mitigate potential or actual security threats.

WLAN Controller Product Roundup

Manufacturer/URL	Representative Product	Standout Feature
Aruba Networks www.arubanetworks.com	MMC-3000 Multi-Service Mobility	Capable of aggregating up to 128 access points
Bluesocket www.bluesocket.com	BlueSecureWLAN Controller	Optimized to support wireless devices and access points from all major vendors
Cisco www.cisco.com	4400 Series Wireless LAN Controllers	Offers security policies, intrusion prevention, RF management, and QoS
HP www.hp.com	ProCurve Wireless Network Access Control Server 745wl	Policy-based architecture allows or denies mobile access based on user identity, location, and time of day
Trapeze Networks www.trapezenetworks.com	MX (Mobility Exchange) Family WLAN Controllers	A cluster of interconnected WLAN controllers can be defined to span a large geographic region

PHYSICAL INFRASTRUCTURE

FEBRUARY 1, 2008

Simpler Installation Of Underfloor Cabling

Panduit's GridRunner System Improves Cable Routing

INCORPORATING A CABLE-ROUTING system into an organization's existing infrastructure can be a costly and time-consuming process. However, with the right system that is both adaptable and easy to install, routing data and power cables under a raised floor does not have to be a tremendous drain on a company's time and resources. Panduit has released a new series of products that make cable routing quick and convenient.

Panduit's GridRunner system includes preassembled mounting brackets that make

installation time-effective and ensure a company's new underfloor cable-routing system can get up and running in a minimal amount of time.

By providing the brackets, Panduit also helps companies reduce the cost of implementing the routing system.

The modular system consists of a series of wire baskets that make up the cable pathway; the drop-in wire basket sections make setup simple. When combined with the pre-



assembled mounting brackets, there is no need to cut components to fit. The entire system is designed to assemble and install quickly.

The wire baskets also provide another advantage: With the open nature of the wire basket, air travels freely through this component to reduce the likelihood of overheating.

Panduit put a lot of thought into the design of the GridRunner components, and the parts do not damage cables due to poor design. The GridRunner parts have rounded edges and bend-radius control corners. Panduit has also used a bonding feature that electrically connects all components and provides electrical protection.

Because GridRunner is a series of individual parts, a company can combine dropin wire baskets and preassembled mounting brackets in a way that makes sense for the company's IT infrastructure.

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CLIENTS FEBRUARY 8, 2008

Rugged & Mobile

Glacier's Ridgeline Tablet PC Brings Computing Power To Harsh Environments



ALL OF US KNOW that harsh environments and electronics do not mix. However, many industries are unable to avoid harsh conditions. That's why Glacier Computer developed the Ridgeline Tablet PC. With this rugged tablet computer, construction, utility, and delivery workers can easily retrieve, send, and manage information.

This rugged tablet computer can withstand repeated 3-foot drops to concrete, and

water and humidity extremes at virtually any temperature. The Ridgeline Tablet PC can operate in temperatures ranging from -20 to 60 degrees Celsius. This tablet withstands even greater storage temperatures, ranging from -40 to 70 C.

For workers on the move, the Ridgeline is portable and comes with a choice of a 10.4-inch SVGA or XGA transmissive TFT touchscreen display with a sunlightreadable option. Numerous hard drive options are available and up to 16GB of Compact Flash memory can be added.

This tablet runs on WinXP Pro or Embedded and can run any application. It uses a VIA Eden 1GHz processor and can be configured with up to 1.25GB of DRAM.

For extra efficiency and functionality while on the go, Glacier includes Bluetooth 2.0 and 802.11a/b/g connectivity. Should your needs require GPS, there is an optional built-in GPS with integrated antenna.

On the front of the device you'll find various application buttons, including 12 numeric keys, one software keyboard button, four programmable function buttons, and a four-way navigation button with integrated Enter button.

Many connectivity ports are available, including two USB 2.0 ports, a VGA output, RJ45 and RJ11 jacks, headphone jack, microphone jack, and a docking connector. This tablet also comes with an internal microphone and stereo speaker.

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FEBRUARY 1, 2008

PHYSICAL INFRASTRUCTURE

Reach Out To Remote Systems

Raritan Dominion KSX II Offers New Management Features In A Streamlined Package



WHEN NETWORK PROBLEMS and server errors crop up, IT personnel must be able to rapidly diagnose and fix the problem. That means remote access and control is necessary, and security is a must.

Enter the Dominion KSX II. It's a new, improved version of Raritan's remote access appliance. The new model brings together

serial-over-IP, KVM-over-IP, and power management and houses them in a streamlined package. The Dominion KSX II is intended for secure, out-of-band control of servers. PBXs, routers, and switches in branch offices and remote sites. It also supports virtual media file transfers to allow rollouts of updates and bug fixes.

Users have BIOS-level access to remote systems, right down to being able to reboot a server or restart a switch. (Some power monitoring and cycling requires the use of Raritan's Dominion PX power strips with the KSX II.) A browser-based HTML GUI offers a top-down look at the equipment under the unit's control.

All of the Dominion KSX II's communications are protected with 256-bit AES and integrated authentication. It also supports strong passwords and locks out users after a number of failed logon attempts.

Another key feature is Absolute Mouse Synchronization, which maintains the remote user's mouse settings no matter which server is being controlled. In addition, the Dominion KSX II is CommandCentercertified, so multiple units (and connected hardware) can be commanded from one IP address. That's a big help to organizations with many far-flung resources.

Should the network fail, the Dominion KSX II offers a built-in modem with dialback capability. The appliance works with

AAA servers, as well as SNMP and Syslog event management systems.

The KSX2-144 includes four KVM, four serial, and two power control ports; the KSX2-188 has eight KVM, eight serial, and two power control ports.

Raritan Dominion KSX II

KSX2-144: \$1,999; KSX2-188: \$2,499

Remote access appliance with serial-over-IP, KVMover-IP, virtual media, and power management fea-

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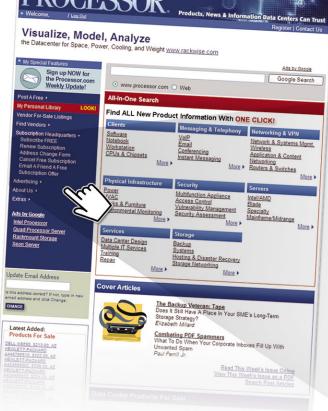
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- 16 Port SATA-II RAID Controller.
- 16x250GB hotswap SATA-II Drives Installed.
- 2x10/100/1000 LAN onboard./ 800W Red PS.

5U Server - ASA5241I

- 6TB Storage Installed. Max-24TB.
- Dual-Core Intel(r) Xeon(r) Processor 5030,
- 1GB 667MHz FBDIMMs Installed.
- Supports 16GB FBDIMM.
- 24x250GB hotswap SATA-II Drives Installed.
- 24 Port SATA-II RAID. CARD/BBU (optional).
- 2x10/100/1000 LAN onboard / 930W Red PS.

Custom OEM Solution

- Custom chassis design as per your needs for your appliances.
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8U Server - ASA8421I

- 10TB Storage Installed. Max-40TB.
- Dual-Core Intel(r) Xeon(r) Processor 5030,
- 1GB 667MHz FBDIMMs.
- Supports 32GB FBDIMM.
- 40x250GB hotswap SATA-II Drives Installed.
- 2x12 Port SATA-II Multilane RAID Controller.
- 1x16 Port SATA-II Multilane RAID Controller.
- 2x10/100/1000 LAN onboard.- 1300W Red PS



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CLIENTS

- General Dynamics Itronix has released the Duo-Touch II, a second-generation version of its light and rugged tablet PC. Designed for mobile workers in the public safety, telecommunications, utilities, government, and insurance industries, the Duo-Touch II includes DynaVue display technology, fingerprint security, wireless support, and a dual-mode touchscreen. Additionally, the Duo-Touch II has an Intel Core Duo U2500 processor and is backed by the General Dynamics Itronix iCareServices programs. These programs include project consulting, workforce management, application development, training, wide-ranging deployment programs, and help desk support.
- HP announced two new energy-efficient business desktop PCs, including the industry's first to feature an SSD (solid-state drive). The HP Compaq dc7800 Ultra-slim Desktop PC with SSD and the HP Compaq dc5800 Business PC meet the environmental requirements of the EPEAT (Electronic Product Environmental Assessment Tool) Gold registry. The dc7800 uses the latest Intel Core 2 Duo processors with optional

Intel vPro technology and a preloaded Verdiem SURVEYOR network power management software agent to help customers reduce processor heat and energy costs, as well as manage power and sleep settings more efficiently. Available features for the HP Compaq dc5800 Business PC include access to a suite of client management tools from a single integrated console, minimum 12-month product life cycle, a single software image for use across the entire platform, and worldwide configurations for consistent deployment for global corporations. For security, the dc5800 includes embedded TPM (Trusted Platform Module) 1.2 and optional HP ProtectTools security software.

Messaging & Telephony

■ Fortiva's SmartStore, an on-demand email archiving solution that complies with Federal Rules of Civil Procedure, provides a cost-effective avenue for businesses to archive email without adding infrastructure or IT staffing. This software as a service gives businesses the opportunity to centrally archive email, enforce policies and litigation holds, search email archives, and conduct early case assessment while reducing costs

and improving email storage. SmartStore enforces consistent email retention policies to provide legal security. Features include redundant email copies being stored internally, as well as externally, at a Fortiva data center; indexing and archiving of emails according to customer policy retention; and enterprise-wide email search options available for administrators and IT staff from a Web-based interface. Fortiva SmartStore starts at \$1.10 per user for a 1,000-user company, with prices varying according to amount of storage required.

- Multi-Tech Systems has unveiled the SMSFinder SMS server. The hardware is compact and can be placed on a desktop or wall mounted. Features of the SMSFinder include an Ethernet interface, a quad-band GSM (Global System for Mobile Communications) cellular modem, and a 20,000-entry address book. The server is designed to handle up to 600 SMS messages per hour and supports sorting, searching, and group setups. The SF100-G single-port model is available starting at \$999.
- Policy Patrol for Microsoft Exchange Server 2007, which combines the email filtering features of both Policy Patrol and Exchange 2007. Policy Patrol enhances spam filtering rates with extra antispam techniques, such as graylisting and SURBL lists, while it makes management easier by permitting users to check their own quarantined spam messages via the Web. Policy Patrol keeps spam messages on the server, notifying users daily (or hourly) of the newly quarantined messages. This reminds users to check their spam messages. Policy Patrol can be constructed to only include

suspected spam so users won't waste time on known spam.

NETWORKING & VPN

■ A10 Networks has recently announced enhancements to its AX Series Advanced Traffic Manager appliances, including the AX 3200 series. Improved features include IPv6 support with SSL, increased email security with encrypted mail traffic, and policy-based Server Load Balancing. The updated AX Series also offers SIP intelli-



A10 AX SERIES

gence for management of SIP traffic in support of particular media functions. Further, A10 Networks provides the new ACOS (Advanced Core Operating System) to control system architectures. In addition, the appliance series is regulated for multicore CPUs.

Apposite Technologies released the Linktropy Mini, a portable version of the Linktropy WAN emulator designed for sales professionals, sales engineers, and product resellers to demonstrate the performance of networking applications at customer sites and trade shows. The Linktropy Mini emulates WAN links of up to 100Mbps, including link bandwidth, delay, jitter, packet loss, and other basic network impairments. The portable emulator features a browser-based interface for installation

Go to Page 16

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	Product 2	Releases	
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storage, and digital signing. It supports digi- tal signatures, thind-party PKI-enabled applications, and email encryption. SafeNet is targeting the iKey 4000 at merchants who need to comply with the PCI DSS.	are computed with all major OSes and software packages. The company's Pro- fessional Edition BlueScale Encryption, which includes a broader feature set, starts at \$12,000.	 Symantee has announced new services and tools to belp organizations implement, operate, and maintain Symantee Endpoint Protection 11.0 and Symantee Network Access Control 11.0, Small businesses. 	Dell, EMC, and Oracle announced th Oracle Optimized Warehouse for Dell an EMC, a preconfigured, validated dat warehouse solution based on Dell Power Edge servers and EMC CLARGON CX
SecPoint's Web Filtering Proxy, designed for use with its Protector, is pow-	StillSecure has unveiled Safe Access Lite, a free version of its NAC (network	with fewer than 100 seats are able to uti-	networked storage systems. The Oracl

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TO WORK FOR YOU!

Product Releases

Continued from Page 15 and configuration, and a traffic monitor displays throughput graphs and statistics to help visualize application performance. The Linktropy Mini is available for \$1,975.

■ Brocade released a high-performance data center networking product called the Brocade DCX Backbone. Designed for innovative performance, scalability, and efficiency, the DCX Backbone is built for high levels of consolidation and cost savings with low deployment and operational risk. Features of the DCX Backbone include up to 896 ports of 8Gbps Fibre Channel; Innovative Adaptive Networking Services to dynamically allocate shared resources; support for Fibre Channel, FCoE (Fibre Channel over Ethernet), DCE (Data Center Ethernet), Gigabit Ethernet, and iSCSI protocols; advanced data fabric applications; and energy-efficient operation.

Brocade also announced its Adaptive Networking services, designed to address the evolving dynamic management requirements of data center virtualization and available as features on the newly released Brocade DCX Backbone. Features of the services include Adaptive Fabric QoS, which allows detailed allocation of data center fabric resources according to the hierarchy in its QoS assignment and moves between physical and virtualized servers; Adaptive Traffic Management, which controls data flow and congestion; Dynamic Fabric Profiling for end-toend analysis of the data flow of individual applications; and Adaptive Policy Management to detect and reallocate underutilized shared physical resources.

■ Cisco launched its Cisco Nexus 7000 Series data switching platform designed to meet the needs of data centers. The Nexus 7000 Series features a highly scalable modular design that supports up to 15TB per second of switching capacity in a single chassis, up to 512 10Gbps Ethernet, and later support for 40 and 100Gbps Ethernet. The Nexus 7000 gives servers access to all network and storage resources to improve data center consolidation and virtualization tasks. Other features include unified I/O interfaces and future support for FCoE. The advanced operating system behind the Nexus 7000, the NXOS, features zero-service-disruption upgrades, virtual device contexts, and XML interfaces to access switch information. The Nexus 7000 Series will be widely available in Q2 of this year starting at \$75,000.

■ ConSentry Networks released the Con-Sentry LANShield Switch based on the company's Intelligent Switching architecture that delivers user, role, and application knowledge. The ConSentry LANShield Switch is capable of automatically learning user and device roles to provide better authentication, management, and activity tracking. The LANShield Switch features application-based QoS at Layer 7; increased control of Web-based applications and instant messaging; complete LAN visibility by user, role, server, and file; automatic device and role discovery; and MAC spoofing and static IP address mapping protection. The LANShield Switch is available starting at \$6,995, and ConSentry switch users with a current support contract can download the latest version of the LANShield OS for free.

■ F5 Networks announced its modular bladed chassis hardware system, VIPRION, which scales business seamlessly without sacrificing manageability or simplicity. VIPRION is an Application Delivery Controller capable of 36G of L7 throughput and 200,000 SSL transactions per second. VIPRION's integration capability allows users to simply add another VIPRION blade instead of connecting a separate device as

their need grows. Linked VIPRION blades can pick up the slack from others if one fails, resulting in reliable traffic processing without interruption. Similarly, a VIPRION blade can be added or taken away without interruption, due to VIPRION's load balancing and consolidation features. TMOS, F5's full-proxy, pluggable architecture, works with VIPRION to manage application traffic comprehensively with flexibility and fluency, allowing VIPRION to work with TMOS to add modules, provide security, access control, accelerate as well as WAN optimization.

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■ Force10 Networks has introduced the C150 resilient switch and a high-density, 8port, line-rate 10Gb Ethernet line card. Force10 says the C150 offers reliability, network control, and scalability for enterprises looking to support existing and future critical applications. The line card gives the company's C300 switch the ability to support 64 line-rate 10GbE ports, while the four-slot C150 can support 32 line-rate 10GbE ports and 192 line-rate Gigabit ports. Further, the card lets IT and data center managers mix fiber and copper interfaces on one card. The C150, which runs FTOS, has support for 15.4W power over Ethernet for all 192 GbE ports and includes an intelligent power-management system that includes per-port prioritization. The C150 is available for \$16,500, and the 8-port card is available for \$16,000.

■ Oracle released Oracle Utilities Network Management System Release 1.8.0, an integrated suite of real-time operations technology applications designed to improve network reliability, maximize asset utilization, and reduce outage durations. Version 1.8.0 includes enhancements to help utilities improve distribution management, including applications for Fault Location, Isolation, And Service Restoration and Volt/ Var Optimization. The Fault Location, Isolation, And Service Restoration application automates fault isolation and determines how to efficiently restore service. To provide a unified application and technology operating environment, Oracle Utilities Network Management System Release 1.8.0 uses Oracle's application infrastructure, including Oracle Database and Oracle Fusion Middleware. It can also initiate closed-loop switching actions to reduce the number of customers experiencing sustained outage durations.

■ Packeteer unveiled the Talon TC30, the latest WAN appliance for Intelligent Service Assurance solutions with increased monitoring execution and Internet delivery speed. Talon works in tandem with Packeteer's IntelligenceCenter platform to monitor bulk applications and service agreements. The Talon TC30 supplements the original PacketShaper 10000 while offering a boost in OC-12 to OC-48 traffic and network administration. Critical networks can be monitored more resourcefully with applications such as the Layer 7 Plus, which improves performance reporting, bandwidth partitioning, and policy enforcement for up to three concurrent Ethernet segments connecting to a costumer's WAN links. This modular appliance also provides event notifications to flag traffic and viral threats. Packeteer's Talon TC30 is listed at \$24,000.

■ RF Code has announced a new rack offering which lets IT personnel perform automated real-time monitoring of rack-level assets. This product updates its inventory of IT assets every few seconds for up-to-date audit data, and, unlike software-based products, RF Code's offering can track servers even if they aren't plugged in or have changed location. The new product is based on RF Code's

hardware, including RFID tags and readers, and its RF Code Zone Manager software.

■ SMC Networks announced the EZ-Switch SMCFS26 24-port 10/100 Standalone Unmanaged Switch, which has two copper Gigabit ports. SMC Networks designed this switch for a small network or for use on the edge of a large network. The SMCFS26 provides clear connections at distances of up to 100 meters. It has a fanless design and includes auto-MDIX for simpler installations without straightthrough and cross-over cables. The EZ-Switch SMCFS26 works in both desktop and rackmount environments. It has a 1U form factor and is priced at \$159.99.

PHYSICAL INFRASTRUCTURE

■ ATEN has released the KL1100 Dual Rail LCD PS/2-USB KVM Console as part of its Altusen product line, designed for enterprise customers. The KL1100 is suitable for server rooms that already have KVM switches installed, while the device's dual interface



ATEN KL1100 DUAL RAIL LCD PS/2-USB KVM CONSOLE

lets the KL1100 support servers and KVM switches with PS/2 or USB connectors. The KL1100 includes an integrated 17- or 19inch high-resolution LCD, touchpad (a hotpluggable USB mouse is also provided), and full-sized USB keyboard in a 1U dual-rail housing that includes internal power (AC or DC input model). ATEN's dual-rail design lets the LCD slide independently of the keyboard/touchpad while remaining in view when a server door is closed. The KL1100 supports resolutions up to 1,280 x 1,024.

■ Atlas announced the Kodiak Series 7.5-ton spot cooler, a portable air conditioner designed for spot cooling indoors or out. The new Kodiak Series 7.5-ton unit, manufactured by NorthWind, is CSA-certified for outdoor use and is UL listed, as well. It's



NORTHWIND KODIAK SERIES 7.5-TON PORTABLE AIR CONDITIONER (SOLD BY ATLAS)

prewired for use with a remote thermostat, can fit through a 32-inch door, and uses quiet belt drive blowers. Both 208/230V/3-phase and 460V/3-phase models are available.

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- New from **Emerson** is the Liebert FDC 480V power distribution cabinet. It can save 2% of the energy costs due to losses resulting from the stepping down of 480V UPS output to 208V or 120V, Emerson says, because the Liebert FDC distributes the UPS output directly to the servers. The 84pole cabinet can be configured as a standalone device or in a rack.
- Panduit has introduced the Cool Boot Raised Floor Assembly, which assists in conserving energy by reducing bypass air in

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a hot aisle/cold aisle environment. The Cool Boot redirects more conditioned air at cooling-network equipment to minimize overheating risks and reduce the costs of cooling data centers. Additionally, the Cool Boot routes and protects cables safely into racks and cabinets via a raised floor. Panduit's Hook & Loop Tie closure system lets users separate two or more bundles to run power and data in the same opening, thus allowing for greater system flexibility. Compliant with TIA/EIA standards and the National Electrical Code, the Cool Boot is made using flame-retardant and electrostatic dissipating materials. The unit is suitable for new or retrofit installations but is specifically designed for Panduit's PatchRunner and NetRunner Vertical Cable Management Systems and Net-Access Cabinets.

■ Tripp Lite added 8kVA and 16kVA models to its power protection line of Smart-Online Hot-Swappable Modular UPS Systems. The 8kVA and 16kVA models feature a detachable PDU (power distribution unit) and a maintenance bypass switch that provides IT staff with zero downtime and continuous availability for connected server, storage, and networking equipment during maintenance services such as a simple battery replacement or a complete power module exchange. The 8kVA SmartOnline UPS System features a compact, 4U form factor to help maximize productivity for server racks and other applications where space is at a premium. The 16kVA SmartOnline UPS System features a separate 4U power module and 4U external batter module, while both models come complete with hardwire, splitphase, four-wire input that saves additional rack space taken up by bulky transformers while still providing high- and low-voltage output (208/120VAC or 240/120VAC).

SECURITY

■ Barracuda Networks announced the newest features in the Barracuda IM (Instant Messenger) Firewall, which enable users to export complete IM conversations into a messaging archive. IM Firewall allows customers to monitor and log all IM traffic over the internal server, as well as public IM traffic over popular applications such as Yahoo!, ICQ, MSN, AIM, and Google. The archiving of these messages into a separate



device frees up space on the Barracuda IM Firewall to allow for better management of email and IM communication. IM Firewall features support for avatars to identify multiple and simultaneous IM conversations, a new user interface for easy manipulation of message log display, and faster search capabilities for message logs independent of message volume. Barracuda IM Firewall varies in price by model but begins at \$1,999 in the United States.

■ eIQnetworks introduced the latest iteration of its flagship SecureVue product offering, a security, risk, and audit management platform designed for medium-sized to large organizations. eIQnetworks also launched two appliance-based versions of SecureVue, the SecureVue 2000 and SecureVue 3000, both of which include preinstalled software for security information management and IT governance, a hardened operating system, Web-based setup, and additional security and compliance features. The SecureVue Go to Page 18



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Continued from Page 17

3000 Central Server has a 1.8TB capacity and support for up to 15,000 events per second. The SecureVue 2000 Regional Server has 1TB of capacity and supports up to 6,000 events per second. eIQnetworks offers SecureVue 2000 and 3000 starting at \$29,995 and \$69,995, respectively.

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■ IronPort's M-Series security management appliance seeks to block spam, malware, and other message-borne nasties before they reach the network. Now in the M-Series is long-term DLP (data loss prevention) tracking of policy violations, user activity, and filter matches. Also included is centralization of message search and tracking, as well as email reporting and threat trend analysis.

■ McAfee announced enhancements to the McAfee Platinum Support portfolio to meet changing needs of enterprise customers, including a global support option. McAfee created Platinum Select, an additional tier in its support program that covers all of its customer products globally and provides a single account manager and direct access to assigned technical Product Specialists. McAfee Platinum Select features several differentiators, including the McAfee Global Solutions Lab, a deployment assistance program, the McAfee Virtual Technician, and a ServicePortal. In all, McAfee now offers four levels of expanding technical support: McAfee Gold, the standard support offering; McAfee Gold Select, with direct access to Product Specialists; McAfee Platinum, with dedicated Support Account Managers, as well as access to the Product Specialists; and the new McAfee Platinum Select, designed for global enterprises requiring additional dedicated resources for highly focused security support. The enhanced McAfee programs provide customers with expanded levels of protection, productivity, confidence, and trust.

McAfee also released McAfee Total Protection for Data, a comprehensive solution delivering complete protection, full visibility, and control of confidential data anytime and anywhere. With unmatched scalability and centralized management, the solution includes endpoint encryption, device control, and host DLP. McAfee protects data regardless of how the data is used, stored, accessed, or located. Customers receive comprehensive monitoring and protection of all communication channels, including corporate email, personal email, instant messaging, file transfer, P2P file sharing, Webmail, and other applications. Through integration with McAfee ePolicy Orchestrator, Total Protection for Data offers completely integrated end-toend endpoint protection. McAfee data encryption ensures Safe Harbor protection by protecting enterprises from the risks of public disclosure, financial loss, brand damage, competitive disadvantage, lost customers, and noncompliance. In addition, detailed auditing and logging along with a rich set of policy and reporting templates helps companies meet and comply with the toughest regulations.

■ Policy Commander 2.0, a security software application for Windows desktop, laptop, and server computers, is now available from New Boundary Technologies. The software is designed for automatic Windows security configurations to protect networks from internal threats. Features of Policy Commander 2.0 include Configuration Groups, so automations can be set according

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to groups, and Offline Enforcement, so offnetwork equipment can be protected from acquiring potential network threats.

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- Secure Computing has released Safe-Word 2008, which provides two-factor authentication, and add-on software SecureWire, which provides a Web-based access gateway for a company's network. According to Secure Computing, SafeWord 2008 is ideal for use with Citrix, Cisco, Check Point, and Juniper products, as well as VPNs, Web applications, and Outlook Web Access. Secure Computing SafeWord 2008 is compatible with 64-bit Windows environments, including Windows Vista/ Server 2008. It also integrates with Microsoft Active Directory.
- Sharkoon Technologies has announced the Sharkoon Swift-Case Securita for 2.5inch SATA drives. This product has integrated RFID technology to safeguard up to three drives against unauthorized access. It includes a silver aluminum enclosure which contains an RFID transceiver. The RFID transponder comes in a plastic fob design for carrying on a keychain. During setup, a unique encryption key is established. To unlock the hard drive, a user simply waves the transponder in front of the enclosure's sensor. The wireless technology includes 128-bit AES encryption. The Sharkoon Swift-Case Securita is compatible with 32bit Windows 2000/XP/Vista, Mac OS 9.x/10.x, and Linux 9.1 or greater. Two transponders are included.
- Voltage Security launched Voltage SecureFile, security software that encrypts any file format with easy-to-deploy, easy-touse features. SecureFile allows users to

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encrypt desktop files, batch files, and documents regardless of where they are located on the computer; encrypt files within Web collaboration portals; integrate with collaboration group policies; and integrate with Microsoft Office 2007. Voltage SecureFile protects sensitive company information and documents as they travel within an internal or external network. The Voltage SecureFile family of products includes SecureFile Client for desktop file encryption, SecureFile for IBM and Lotus Quickr, SecureFile for CL to encrypt batches of files, and SecureFile for Voltage Security Network for file encryption through managed services. Pricing begins at \$50 per user for SME customers. SaaS (software as a service) offerings will be available later this quarter.

SERVICES

■ **1&1 Internet** announced that an overall bandwidth of more than 120Gbps is available for 1&1's data centers in Europe and the United States. The extension of 1&1's WAN helps ensure customers receive bandwidth for multimedia applications, such as video and audio streaming. To help extend the network in the U.S., 1&1 connected to a large Internet Exchange point in Chicago (at Equinix), and next month, 1&1 will connect to its Lenexa, Kan., data center to more than double external connectivity in the U.S. Additionally, 1&1 now utilizes Ethernet technology on its WAN rather than the SDH (Synchronous Digital Hierarchy) standard.

STORAGE

■ Addonics has released the 5x1 EPM (External Port Multiplier) for attaching five external eSATA drives to a computer using

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- spots in your data center



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one eSATA host port at up to 3Gbps. (Backward compatibility with 1.5Gbps controllers is included.) Addonics says the hard drives can be configured as RAID 0, 1, 5, or 10; combined into one volume; or configured as five separate drives. Using an Addonics' 4-port eSATA PM-compatible controller and four EMPs, users can connect up to 20 eSATA drives or optical drives to one computer. Additionally, hotswapping abilities let users attach and remove the EPM without powering a system down. The EPM is housed in a 0.98- x 5.32- x 2.56-inch (HxWxD), heavy-gauge metal case that includes ventilation slots on the side. The operating system-independent EPM is FIS (Frame Information Structure)compatible and is available for \$95.

■ AmeriVault has released the expansion of the AmeriVault-EM archiving suite with Email Continuity. SMEs can now maintain their email service and business communication if application interruption occurs. This enhanced archive will store previously sent and received messages for optimal data recovery. Email is protected through automatic online backup and offsite security. Additionally, AmeriVault's Email Continuity features nonalterable WORM storage and ediscovery tools. AmeriVault CEO Bud Stoddard says, "Email Continuity eliminates the time and costs associated with recovering email data to continue service during an outage and allows users to access email over the

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■ EMC announced its MozyEnterprise SaaS offering, designed to deliver automated online backup of desktops, laptops, and remote Windows servers. Users running MozyEnterprise will take advantage of the

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Internet from anywhere in the world."

EMC Fortress platform to deploy, purchase, manage, and meter the product. Enterprise customers will appreciate MozyEnterprise's enhanced security features, including RSA, integrated key management, authentication, and authorization; support for assisted activation and auto-activation; and affordable offsite data protection for remote servers, desktops, and laptops. MozyEnterprise is available for a monthly fee of \$5.25 per desktop or laptop and an additional 70 cents per month per gigabyte protected. Windows Server customers will pay \$9.25 per month per Windows server, plus another \$2.35 per month for each gigabyte protected.

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■ Emulex introduced a storage networking solution in conjunction with Cisco and VMware. The solution operates VMware virtualization infrastructure and integrates Emulex LightPulse 4Gbps HBAs (host bus adapters), Cisco MDS Fibre Channel switches, and VMware ESX Server 3.5. The storage networking solution also includes industry-standard NPIV, allowing customers to protect data and produce better QoS while preserving SAN best practices. Additionally, NPIV functionality is incorporated into VMware VMotion technology, which improves storage access by sustaining the same Virtual Port ID while also moving live virtual machines from one physical host to another.

■ FalconStor Software has unveiled FalconStor VTL (virtual tape library) Enterprise Edition, which works with FalconStor's clustered deduplication technology, SIR (Single Instance Repository), and offers scalable I/O performance and storage capacity to adjust to both remote offices and enterprise data centers. FalconStor VTL supports Linux and Solaris, as well as VMware's Virtual Appliance, through versatile connectivity options (4Gb FC, 10Gb Ethernet, or 20Gb InfiniBand) and disk arrays (SATA, SAS, FC, MAID). It also integrates with third-party backup software vendors.

■ Isilon Systems has released the X-Series IQ clustered storage system for virtual data centers. Isilon is collaborating with Cisco, ColdWatt, Intel, Mellanox Technologies, Riverbed, and VMware to solidify maximum enterprise virtualization deployment. The X-Series offers a scaling capacity of 1.6PB by utilizing the OneFS software. Through enhanced system performance, data write and random access is increased up to 60% more than the previous series; total advanced power efficiency provides cost savings for any enterprise. The Intel Xeon 5130 processor increases functionality more than 20 times over that of a standard SAN. Furthermore, the X-Series offers single-point management for storage management in virtual environments.

■ NTP Software announced NTP Software QFS for NAS, NetApp Edition 6.0. NTP Software QFS for NAS, NetApp Edition 6.0 introduces features that provide additional flexibility to simplify data management and reduce administrative overhead, allowing storage administrators to increase their productivity. Key features that will provide enhanced storage management capabilities for the NetApp platform include enhanced administrative reports, automatic system monitoring, and a tailored end-user HelpSite. Admin reports included within QFS have been enhanced with the means to automate the scanning, processing, and emailing of reports. The NTP Software WatchDog service provides enterprise environments with an added level of protection to ensure that both NTP Software QFS and Network Appliance Data ONTAP are working together in harmony. The custom-tailored HelpSite has been expanded to offer more functionality to the user community, as well as improved compatibility within existing enterprise environments. The software now supports Apache and Microsoft IIS Web servers.

■ Host-based SAS/SATA RAID controllers for the PCI-E interface are now available from Promise Technology. The SuperTrak EX4650 (4-port) and EX8650 (8-port) are hardware-based RAID 5/6 cards with Intel's 81348 IO processor. With support for Linux, as well as Windows, these SuperTraks are intended for entry-level to midrange servers. Meanwhile, the FastTrak TX2650 and TX4650 are software-based RAID 0/1 cards with a Promise ASIC.

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■ QNAP Systems released the TS-409 Pro Turbo NAS, a 4-bay, hot-swappable NAS for business users. The TS-409 Pro features RAID 0/1/5/6/5+ disk redundancy, Online RAID Capacity Expansion, and Online RAID Level Migration. HDD S.M.A.R.T. and complete log systems are supported to minimize deployment cost and maintenance effort. Advanced RAID 5 and RAID 6 are supported to maintain nonstop service of NAS, and the RAID management functions enable server managers to expand the storage capacity or migrate the system to a higher RAID redundancy level without turning off the system. Additionally, the TS-409 Pro features encrypted FTP, SSLencrypted Web-based access, SSH login,

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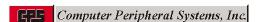


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OPINIONS

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Another Hit For Women In IT

A while back, I wrote a piece about the underrepresentation of women in IT. A recent study on the perceptions of angry men and women in the workplace has me back speaking my mind again.

Angry Men Get Ahead, Angry Women Get Penalized

Victoria Brescoll, a post-doctoral scholar at Yale University, recently conducted a study on the perceptions of anger in the workplace and how those perceptions differ between professional men and women. The study itself was not confined to one particular industry, and the findings apply to all women in the workplace, including in IT.

The results of Brescoll's research revealed that a man who gets angry at work, or who displays angry emotions (that is, in an attempt to dominate others), may well be admired and respected for it, while a woman (presumably in the same position and status) who displays similar behavior is liable to be seen as "in a mood," "out of control," or less competent than her male counterparts.

What's A Girl To Do?

Taking these findings into account, it would seem that in order for any professional woman to get ahead in the workplace, she must hide her emotions at all times.

However, the good news is that in some instances an angry woman can be exempt

from the incompetent or moody stereotype and be more likely to be understood if she has a good—and presumably public—reason for being angry. Nonetheless, in repeated research trials, Brescoll's study still found that angry females were almost always perceived to be less competent than their emotionally charged male counterparts.

So what's a working girl to do? If we take Brescoll's research at face value, it would seem that in order to be respected or even get ahead at work, any self-respecting, professional woman must always hide her emotions—or at least her angry ones—because if she doesn't, her colleagues will think she's "being irrational" or completely incompetent, unless of course she has a really good excuse.

Talk About Double Standards!

Interestingly, Brescoll's research also found that women who were modest about their professional accomplishments earned on average less than women who were not. But, contrary to Brescoll's findings, self-promotion may not be the best course of action for professional women to take. Many other studies, sourced by Brescoll, found that women who brag

about their professional accomplishments and successes are perceived to be less likeable and are less desirable job candidates (despite being qualified and competent), especially in high-ranking executive positions.

When one steps back and summarizes everything that these studies are saying about women in the workplace, one finds that:

- A woman can't get angry at work; otherwise, she will be regarded by her counterparts as moody and/or incompetent.
- A professional woman can tout her career successes and abilities but only at

What Does It All Mean?

As a woman just embarking on my own professional career in IT—an area typically dominated by men—I believe that Natalia Fereyra in her article, "Angry Women Executives are Perceived to be Incompetent," says it best: "Despite the results of [Brescoll's] studies, a woman's employer and her colleagues . . . have the ability to distinguish between perception and reality. I like to think that when employers and colleagues see a female [counterpart angered by] something, they will understand that her momentary anger

won't cloud her judgment, nor will it erode her [professional abilities or] competence."

Just like women's underrepresentation in the world of IT, Brescoll's findings are a tell-tale indication of how and why women continue to experience so much difficulty getting ahead in the workplace and in IT. Until society can shake its deeply ingrained stereotypes and discriminato-

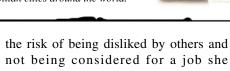
ry attitudes toward women, the success of women in the workplace will continue to be impaired.

To quote Fereyra again, "Brescoll's study just goes to show that changing stereotypes and perceptions is like turning a lump of coal into a diamond. It takes time, pressure, and lots and lots of patience." (Without showing anger, of course.)

Send your comments to infotech@processor.com

MORGAN CHMARA

Research Analyst Morgan Chmara is a recent graduate from The Richard Ivey School of Business at The University of Western Ontario. Her strong background in financial modeling, accounting, healthcare, and IT make her a welcomed addition to the Info-Tech team. Chmara has significant experience in international business and relations, living and working in various metropolitan cities around the world.



 A woman can be modest about her accomplishments but accept lower earnings than her not-so-modest female counterparts (either of which make on average 20% less than their modest or extremely cocky male counterpart).

Talk about a no-win situation. Whatever happened to equal opportunity?

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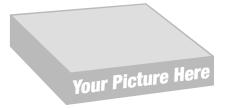
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SIX QUICK TIPS

Buying An Effective Monitoring System

by Curt Harler

POPULAR WISDOM SAYS NOT to put all your eggs in one basket. However, most data centers do have all of their computing resources in one place. So it's best to keep a close eye on that basket. Buying good monitoring equipment allows small to midsized enterprises to do just that.

"If you are in the market for data center monitoring gear, there are differing levels of equipment that must be addressed," says Mike Stout, vice president of engineering at Falcon Electric (www.falconups.com). "The best use of these monitors is for critical or problematic locations."

What should you keep in mind as you're looking to purchase a monitoring system? We spoke to some experts to find out.

Simplicity Is Key

When an SME wants to purchase data center monitors, it should look for something simple to implement and use, says Brad Wilson, chief technical director with Geist Manufacturing (www.geistmfg.com). "SMEs may not have the personnel to spare for someone to learn a complex monitoring system," he says. "Products should be plug-and-play. Software should be embedded in the unit with nothing external

to load." He adds, "Look for products that are affordable and without expensive service contracts."

Wilson points to Geist's RacSense Environmental RSMINI163 unit as one example of an environmental monitor that's easy to implement. It offers 16 sensor ports for temperature, airflow, and humidity sensors and a trio of I/O ports for door, water, and contact closure sensing. "These units are simple to set up, easy to use, and very reasonably priced," he adds. The products run on any Web software (Internet Explorer, Firefox, etc.) with no external software.

Greg Ratcliff, marketing manager for Liebert Monitoring (www.liebert.com), recommends using the software system offered by your vendor, whichever company that is. "If you use a particular vendor's products, then use their software," he says.

Ratcliff recommends Liebert's Nform 2.0 for Liebert customers. It is a classic SNMP manager, fully integrated into cooling, power, and distribution. Its dashboard gives IT managers a snapshot of all of their IT support systems.

Start With Temperature

Wilson says that temperature sensing is the place to start when considering a monitoring system. "Temperature is the No. 1 killer of IT equipment," he says, adding that it's not enough just to monitor general data center temperatures. "Each cabinet and each AC unit should be individually monitored."

"Cabinet monitoring ensures early notification of critical cabinet temperatures. Early warning of rising temperatures can save equipment," Wilson notes. "Additionally, monitoring the ins and outs of AC equipment not only tells you the AC is working, but by using trend data, you can determine if preventative maintenance is needed."

By The Numbers

As you're buying monitoring equipment, a good rule of thumb is to spend in the range of 8 to 10% of the value of the equipment being monitored. Two factors come into play: the value of the equipment (and what it runs) and the pain threshold of the budget.

Another suggestion is to get started by using affordable equipment to monitor data in as many places as possible. Like a good physical checkup, the ROI of monitors often is in "soft" dollars—horrific situations prevented.

"Problems can occur at many points within the data center, and creating a mesh of sensors allows not only early detection, but trend data over time can point to growing issues that may not otherwise be obvious," Wilson says. To increase ROI, he recommends equipment that can be monitored by central console software so aggregate views from all units give the big picture at a glance. "Monitoring software needn't be expensive to do the job. It needs to be effective at gathering pertinent data and delivering warnings and alarms with as little latency as possible," he says.

Ratcliff says it costs no more to use the data gathered by monitoring software. "When you see trends, you don't have to react to emergencies. You can predict needs ahead of time," he says. "Monitors can't be the end of the line for the data they collect." He warns against buying a product that manages everything but will not export data to other systems.

Make It Manageable

SNMP-enabled hardware devices automatically notify an IP-specific remote computer or workstation of hardware failures, critical warnings, and alarms using a "traps" feature, so keep those options in mind when buying a system. Network management software, such as HP Open-View (www.hp.com) or IBM NetView (www.ibm.com), is available to manage any SNMP-enabled hardware from any remote computer. This is accomplished by

installing a hardware-specific, industrystandard interface software called the MIB (management information base) into the network management software.

RFC-standard MIBs are available for most hardware. Committees consisting of the manufacturers from each device industry developed them. Printer MIBs are specific to printers, UPS MIBs are specific to UPS systems, etc., Stout says. Other software products, such as CA's Unicenter

BONUS TIPS

Add up the bill. As with any product you buy, check the company's warranty, its service policy, and its reputation. One important thing to remember is to think beyond base unit cost. Add up sensor cost. "Creating a strong mesh of sensors throughout the data center can add up to thousands of dollars if sensor cost isn't considered in looking at the TCO for an environmental monitoring system," Wilson says.

Save money by protecting monitors. You keep your computers secure. What about the monitors that check equipment? "Most data center monitoring devices incorporate password protection," notes Mike Stout, vice president of engineering at Falcon Electric (www .falconups.com). The new SNMP II specification adds user-level access control to the password and login protections, he notes. However, the easiest solutions to implement are devices that also support HTTP interface capability in addition to SNMP. Stout adds, "This allows any Web browser to be used to access, monitor, and manage the device. SNMP requires the use of costly network management software."

(www.ca.com), facilitate more advanced hardware management and monitoring, even providing remote management and monitoring capabilities at the operating system level, whatever the operating system type.

"Using these tools, the hardware composing the data center infrastructure can be monitored and managed from a single central location, drastically reducing the overall management costs," Stout says. Companies with multiple sites can monitor most of the hardware located at corporate IT and data center installations throughout the world from one spot at corporate head-quarters.

Ratcliff says lower-end operations will use SNMP, midsized operations (10 to 50 racks) will usually integrate with a building management system, and the largest sites (100-plus racks, a 5,000-square foot room, and dual-bus systems) will have independent monitoring.

BEST TIP:

Know What To Monitor

As you're considering what system to buy, keep in mind what exactly you'll be monitoring. Key spots to monitor include temperatures inside newly configured or critical equipment racks, video surveillance of remote server

locations, and power sequencing of large equipment configurations. Other things to watch include sound, light, humidity, and phone and RS-232 interfaces, and, of course, watch for smoke and fire.

EASIEST TO IMPLEMENT:

Focus On Hardware

Experts agree that the most important level for monitoring is the heart of the data center, the hardware. The system should cover servers, printers, disk arrays, routers and switches, and UPSes. Hardware supporting SNMP allows for remote monitoring and management via Ethernet LAN, WAN, or the Internet from one location.

One often overlooked area in monitoring is water, says Brad Wilson, chief technical

director with Geist Manufacturing (www .geistmfg.com), so keep that in mind when purchasing a new system. "Water issues are often overlooked and can wreak havoc on IT equipment. Water can enter a data room from AC equipment, a leaky roof, a sprinkler system. Early notification of water issues can be done with perimeter monitoring or spot monitoring."

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Benefit From The Automation Of Routine IT Tasks

by Robyn Weisman

As NETWORKS BECOME more complicated and IT staff overworked, chances for human error for even the most basic IT tasks shoot up. Therefore, automating routine IT tasks can minimize headaches, both for networks and those running them. Moreover, IT automation can improve resource allocation and save cold, hard cash—something all companies, large and small, can always use more of.

As SMEs start to incorporate virtualization into their networks, IT automation strategies grow increasingly important. Mihir Shukla, CEO of automation solutions provider Tethys Solutions (www.tethys solutions.com), points out that when a single physical server holds three virtual servers, perhaps with each having a different operating system, it becomes harder to test and validate. "People create various automation and validation routines, and they put them in different virtual machines and make sure all of them are configured properly," Shukla says.

Automating Events

Task automation has evolved in the last couple of years, Shukla says. Until fairly recently, most automated tasks were calendar-based, in which you might set up a script to back up your data every Saturday night.

Now event-based automation is becoming more prevalent as the data center becomes more inundated by alerts. "We might see 100 alerts in a given day of various types, and many of these alerts can be responded to by an automation routine," says Shukla.

For example, a log file larger than 200MB can slow server performance, so you could set up an event that will automatically scrub or rotate the log file once it goes over the size, says Shukla.

For his part, Kris Domich, principal consultant for data center and storage solutions at Dimension Data (www.dimension-data.com), says that backup operations within data centers ought to be automated as much as possible. "Leaving this [type of] responsibility with a person, who may or may not remember or may not be available when backups need to begin, is just too risky," says Domich.

Domich also recommends that backup reporting should also be automated. "However, these reports [should] be reviewed manually on a daily basis to ensure all backup jobs are completed successfully and no error conditions are present," he says.

Tasks To Automate

According to Shukla, many tasks can be automated, particularly processes that run between servers. "Job scheduling is definitely one. People want to archive files, date backups, restart services every few days, reboot file servers, create users, rotate log files or scrub the log files as the size of the log files increase, monitor servers and databases, [and] monitor email servers to make sure they are working fine," he says.

Dimension Data's Domich advocates that SMEs should also automate environmental

monitoring, which includes monitoring the power consumption and temperature of the data center, from the UPS to the rack and component levels.

"Understanding the state of your equipment aids in the overall capacity management of the data center," Domich says. "This visibility is essential to planning data center expansion and mitigating the risks associated with adding more equipment than can be adequately cooled."

Benefits Of Automation

Shukla says that the benefits of automating routine IT tasks start at basic cost savings. "Various job processing tasks or monitoring servers see about 15 or so alerts in a typical data center of this type. If you take 20 to 25 minutes to dissolve one of these alerts, you are talking about \$100,000 a year, simple mathematics," he says.

According to Shukla, automated troubleshooting has trended in the last couple of years.

"If I look at data centers two or three years ago, regardless of level of automation, the problem solvers were still the people. Now we see that data centers are beginning to take a step forward, [saying that these types of] problems have a standard solution and can be solved with an automated routine," he says.

Perhaps the greatest advantage Shukla sees in automation is the strategic ability to realign human resources. "Every organization has 'x' number of expert employees. Those experts are no longer solving problems that can be done by automation, and they are available to redeploy in other areas," Shukla says. "We have seen in the real world people who were bogged down by alerts, putting automation things in place, and three months down the line you go there and you hear, 'You know the project we have wanted to get to for the last two years? We got to it because we don't have to do [those routine tasks] anymore!"

Tips For Task Automation

Vincent DiPippo, founder and president of FOCUS24 (www.focus24.com), an IT infrastructure optimization consultancy, recommends you keep several concepts in mind when automating routine IT tasks.

- You will have better results automating a large number of simple tasks than trying to automate a few complex ones. Automating complex tasks is sometimes as complex to implement and keep running as the task you are trying to automate.
- Tasks that are being run on a regular basis (daily, weekly, or monthly) are good candidates for automation.
- Note the difference between automating the invocation of a task and the components of a task. The former involves having a task run at a specific time without intervention, which requires a task that is intelligent enough to know whether it should run, handle errors, log, and report on status. The latter involves automating a task that perhaps has dozens of steps by allowing the operator to invoke each step with a single mouse click.
- Documentation is essential. Infrastructures
 have the potential to have a large number
 of undocumented or even unknown tasks
 that are automated. While many still perform useful functions, the fact that they are
 completely unknown and do not usually
 survive infrastructure changes make them
 a cure worse than the disease.

Shukla says this allows your organization to become more proactive rather than reactive. "The speed at which organizations can move changes, and I tell people, if I just get this benefit for my organization, I would go for automation. Moving faster is worth a lot of money," he says.

IT Automation Products

Manufacturer	Product Name	URL	Description
Advanced Systems Concepts	ActiveBatch	www.advsyscon.com	Provides enterprise-level job scheduling capabilities with a centralized view of jobs across platforms and integrates workflow between applications and platforms
Alloy Software	Alloy Navigator	www.alloy-software.com	Provides an ITIL-level automation solution for a range of routine IT/data center tasks, including job scheduling, notifications, and email
GridApp Systems	Clarity 4.0	www.gridapp.com	Provides out-of-the-box automation for database provisioning, patching, configuration management, server validation, and compliance enforcement
HP Software	HP Network Automation (formerly Opsware Network Automation System)	www.hp.com	Provides automation of operational life cycle of network devices, from bare-metal provisioning to policy-based change management
Optinuity	Oasis	www.optinuity.com	Provides an Autonomic Policy Management system to proactively manage scheduling technologies, policy management, and adaptive monitoring in a clear-cut, closed-loop solution
Tethys Solutions	Automation Anywhere Enterprise 4.0	www.tethyssolutions.com	Automates a host of routine tasks; provides remote deployment, intuitive GUI for simple and complex tasks with its Workflow Designer, task to EXE capability, and a single database of all events in your automation environment with its System Logs

STORAGE FEBRUARY 1, 2008

Powerful Network Backup

Arkeia Adds Features For SMEs With Distributed Data & Remote Offices

YOU DON'T NEED TO spend a lot of time and money dealing with a complicated data manager. Arkeia Network Backup version 7.0 is a simplified, powerful enterprise-ready network backup and data protection solution for intricate and dispersed enterprises, such as those with remote branches.

With business packs available for small, medium-sized, and large networks, version 7.0 is designed to save time and money while enhancing backup performance and flexibility for distributed infrastructures.

Version 7.0 adds several new features:

Federated data protection architecture. Centralized management of various

instances of Network Backup software is now offered with the new version 7.0. It manages remote office data and controls global backup and recovery policies.

Integration with EdgeFort appliances. This integration allows for deployment of hardware, software, and/or appli-



ances from the data center to the remote branch.

New GUI. This Web 2.0-based user interface now includes online help and wizards,

making the program easier to install, configure, and manage.

Enhanced virtual tape library. It now offers the highest level of granularity on how files, directories, and tapes are managed. Version 7.0 has also included integrated VTL for better disk-based backup structure and quicker backups and recovery. 1TB of disk capacity is included.

Extended platform. Version 7.0 has been expanded to support Novell OES 2, Mandriva 2008, Windows Server 2008, and Mac OS X Leopard on Intel.

Arkeia Network Backup version 7.0 includes other innovative data protection features, such as triple backup verification, automatic SCSI detection, and client-side encryption. Additionally, Version 7.0 is suited for enhancing SAN environments, and it offers just one solution for all platforms.

Arkeia Network Backup version 7.0 supports open-source systems such as Linux, MySQL, PostgreSQL, Open-Xchange (including SLOX), and LDAP.

Arkeia Network Backup version 7.0

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PRODUCTS AT WORK

Physically Supporting Technology

Sound Technologies Chooses Hergo Technical Furniture

by Sandra Kay Miller

THERE'S NO DENYING that electronic technology has become a critical aspect in practically every industry, but how it's supported is often overlooked. No, we're not talking about the IT staff or help desk, but literally the furniture on which the equipment rests.

Increasingly, technology is being deployed in environments that require customized cabinetry for installations unique to the application. No longer do simple desks or heavy rackmount cases suffice, especially in challenging environments with specialized equipment or needs, such as mobility or space-saving features.

This trend has become especially evident in the medical industry, which has long been a leader in cutting-edge technology. However, for computer equipment and the supporting workstation infrastructure to be conducive to a clinical environment, there are unique requisites differing from a traditional office installation.

Digital Imaging Provider

Sound Technologies (www.soundvet.com) of San Diego, Calif., is the leading digital imaging and PACS (picture archiving and communication systems) company in the veterinary industry, providing technologies including ultrasound, digital radiography, mobile imaging, telemedicine, and PACS solutions. Founded in 1996, Sound Technologies is a Division of VCA Antech, which owns, operates, and manages the largest network of independent veterinary hospitals and veterinary-exclusive clinical laboratories in the United States, employing approximately 4,800 professionals.

According to Ryan Valan, Sound Technologies' director of field applications, more than 700 of its digital radiography systems have been installed in small animal hospitals and zoos all over the world.

Digital radiography has been growing due to its many advantages: no readers, cassettes, film, or chemicals, and the X-ray image is instantaneous. Another big plus is the reduction of hazardous waste and exposure to radiation. Thanks to the

nature of the digital radiographs, the images themselves are easy to store, retrieve, transmit, copy, print, enhance, manipulate, magnify, and even share online.

Based upon the PACS DICOM (Digital Imaging and Communications in Medicine) standard the medical community uses, Sound Technologies also offers VetPACS, a server or Web-based solution that allows veterinarians instant access to their radiological image database from any Internet-connected workstation.

When Sound Technologies decided to switch from a wall-mounted unit to a mobile solution for the physical support system of its dig-

ital X-ray acquisition computer system, it chose to go with Hergo Ergonomic Support Systems (212/634-4270; www hergo.com). Hergo topped the list not just because of the products offered but because it was a substantial and stable company with a good reputation that was able to provide the quantities of the product Sound Technologies needed. "We picked Hergo because of its products' style, ease of implementation, and flexibility," says Valan.

Hergo Basics

Hergo, based in New York City, is a manufacturer of technical furniture, including mobile and open frame carts, vertical carts for medical equipment and PACS, and wall-mounted tracks.

Founded in the early 1990s, Hergo was created as a sister company to Hertz Computer, a manufacturer of custom computers. When founder and CEO Eli Hertz went onsite to install computers, he realized those same customers also needed a way to organize their equipment, so he began building LAN stations and cabinets, moving into mobile workstations as mobile computing needs became more prevalent.

"We are an original manufacturer, which means we don't go through a third party. We do all our own manufacturing onsite here in New York City. We manufacture anything and everything to organize computer workspaces and computer labs. Our goal is to increase productivity by organizing equipment for easier accessibility," says Kristen Speranza-Diamond, vice president of Hergo.

While Hergo's standard open racking units are 72 or 84 inches high, it realized that radiology departments required a lower vertical and thus built its PACS workstations with a 30-inch frame. After further examining how organizations use the workstations, Hergo designed its PACS workstation to offer multiple flat-panel radial arm assemblies, allowing engineers and technicians to view more than one monitor

hergo TECHNICA WORKSPA SOLUTION

at a time, along with the option of a keyboard and mouse tray. "We pack it on heavy-duty casters since there is a lot of wheeling around, and it's a compact unit because space is tight in hospitals and clinics," says Speranza-Diamond.

Another space-saving piece of equipment is Hergo's Post Cart—basically a pole on wheels that supports a CPU, monitor, and keyboard/mouse tray. "Not everybody has the space for the higher frames or even the width of the standard open configuration. In these situations there's only minimal space for the footprints, which means they need to be able to move it around quickly and to be able to push it up and out of the way when it's not being used," notes Speranza-Diamond.

To further meet the demanding sanitary needs of a medical facility, Hergo's computer carts and workstation PACS are made from an aluminum alloy. "In hospitals, you're dealing with things like blood spatter, so it has to be easy to clean," Speranza-Diamond says.

A mobile design with a reduced footprint able to withstand the rigors of medical environments has led to Hergo's technology support equipment being deployed in a number of interesting installations throughout the world.

Sound Technologies currently uses Hergo's Open Rack Carts (PACS workstations), Mobile Carts, and Vertical Track Systems in its TruDR digital radiography applications as a means to hold the acquisition station so the computer required to take the X-rays can be located next to the X-ray table.

Turning to a mobile solution allowed Sound Technologies to solve one of the biggest problems veterinarians face during orthopedic surgery—post-operative radiographs. Previously, surgeons would have to physically move an anesthetized animal from the surgical suite to the Xray room and then to a third location for bandaging and post-operative care. Sound Technologies responded to this dilemma by creating a self-contained, mobile digital radiography system with an onboard X-ray generator, providing access to Xrays, even on the surgical table. The entire system can even be moved without powering down.

Challenges

However, the transition from the previous design to Hergo's products has not been without a few technical difficulties

and downsides. "It takes a while to put all the pieces of the carts together," says Valan. "The actual cart, though, once it's assembled with pieces that are supplied and are the right size, it fits our application quite nicely."

Although the TruDR solution was introduced in 2004, Sound Technologies has been using Hergo's products for two years. During that time, some design changes were necessary. "The pole for the Mobile Cart needed to have a change to the clamping system due to difficulties. The new one is much better," says Valan, satisfied that Hergo has strived to improve its products.

Valan adds, "Our current platform isn't going to be changing anytime soon. We're under the adage of 'If it's not broke, don't fix it."

Hergo Computer & Technical Furniture

Manufacturer of modular and interchangeable furniture products for computer and electronic hardware, peripherals, and communication equipment

"We picked Hergo because of its products' style, ease of implementation, and flexibility," says Ryan Valan, Sound Technologies' (www.soundvet.com) director of field applications.

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Big Pipes On The Way

What's Driving 10GbE & MPLS Adoption?

by Sandra Kay Miller

BANDWIDTH-INTENSIVE TECHNOLOGIES and applications such as VoIP, streaming media, and IPTV are driving the adoption of networking technologies capable of supporting increasingly heavy IP loads. Anything and everything is ported to the Internet, and our appetite for bandwidth continues to grow in both the enterprise and consumer sectors.

In an effort to ramp up bandwidth, carriers and enterprises are rolling out two technologies—MPLS (Multiprotocol Label Switching) and 10GbE—both designed to deliver data faster and more efficiently.

A New Way To Carry Data

According to the most recent data from a study conducted by Nemertes Research, MPLS-based services grew from 24% to 42% between 2004 and 2006. More than half of the respondents were either currently using or planning to implement MPLS by the end of 2006.

As the adoption of MPLS grows, ATM (Asynchronous Transfer Mode) and frame relay services are declining. Infonetics Research estimates during the next 15 to 20 years, ATM will become obsolete.

Charles Thompson, manager of sales engineering for Network Instruments (www.net workinstruments.com), sees MPLS becoming commonplace as the technology is increasingly being engineered into architectural designs. "In some ways, it's being forced upon the user base because the carriers

are transitioning away from legacy technologies, especially frame relay," he says.

Another factor contributing to the shift toward MPLS is the trend toward decentralization. "You look at companies that are starting to have multiple data centers, multiple disaster recovery sites located both here in the U.S. and around the world. Decentralization is being pushed by two factors. One factor being the sheer amount of data that organizations are moving through the network," notes Thompson.

Also contributing to decentralization is a change in acquisition handling. Thompson has seen larger organizations acquire smaller companies and create subsidiaries. Instead of replacing existing infrastructure, they're simply adding those into the overall infrastructure—not getting rid of them but simply offering connectivity to them. "MPLS has been a huge factor in that trend," he says.

The Next Generation Of Ethernet

Carriers are also increasing their use of Ethernet as speeds have increased tenfold in the latest standards for 10GbE. Infonetics Research reported that in 2006 and 2007, Ethernet traffic increased by 90% to 100%.

Aside from carriers, Thompson is seeing more companies migrate to hosted apps as bandwidth becomes available. However, many of the people that Thompson has spoken to seem to think the emergence of a mesh network such as MPLS could push 10GbE to the back burner. "Now I don't have these giant single pipes running to a main location. Instead, I've got a lot of smaller pipes running to different locations," Thompson theorizes, although he estimates that scenario holds true in only half of cases.

But with 10GbE coming down in price, Thompson thinks that enterprises will begin to free up their GbE ports that previously ran as backbones or inner switch connects and expand infrastructures by adding a few 10GbE links while reallocating smaller links.

Changes & Challenges

With the adoption of technologies such as 10GbE and MPLS, there will be fundamental changes in users' computing habits. "The absolute thought of burning a disc and handing it to someone is such an archaic process these days already. Thanks to increasing bandwidth, media is fast becoming a thing of the past," says Thompson.

The transition to MPLS and 10GbE will also create a number of challenges for smaller organizations. With their maturity, frame relay and ATM are well-understood. With the move toward MPLS, SMEs will initially have to rely on their carriers. "What I'm seeing now is that carriers are saying 'I'm not going to give a T1. I'm not going to give you a DS3. What I'm going to give you is an RJ45 cable running straight Ethernet, and I'm going to strip all of that MPLS off at that last carrier site before it arrives to you. That way, you don't have to worry about anything," says Thompson. While that may prove beneficial for many organizations, they will be sacrificing some independence and visibility into their networks and reduce their ability to make the carriers accountable to the terms and quality of their service.

The bottleneck at this point in the adoption of MPLS and 10GbE is monitoring and security. Currently, there are plenty of available tools in the Gigabit Ethernet realm that exist, but many of the players in the security space

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What's The Difference?

MPLS

Multi Protocol Label Switching is not a service; instead, it is a type of mechanism for carrying data over packet-switched networks. Operating between the data link layer (Layer 2) and the network layer (Layer 3) has earned it the casual designation of the "Layer 2.5" protocol. Not just limited to IP traffic, MPLS offers integrated data transmission service for packet switched networks, including those carrying ATM (Asynchronous Transfer Mode), SONET, and Ethernet.

The differentiating factor of MPLS is packets are tagged with a unique forwarding equivalence class, or FEC, by adding a short bit sequence upon entering the network. Routers armed with FEC tables don't need to perform header analysis independently at each router once a packet enters the network.

10GbE

10 Gigabit Ethernet is the next generation of approved Ethernet standards specified by the IEEE. It can be used over fiber, copper cabling, or twisted pair. 10GbE operates using full duplex links connected by switches and, therefore, is still able to support all services, such as VLANs, QoS, VoIP, security, and MPLS.

don't currently have the capacity for 10GbE IDS/IPS and network monitoring solutions.

That's not to say there are no products available. For example, F5 (www.f5.com), a leader in application delivery networking technology, offers 10GbE capacity on its line of BIG-IP products. Peter Silva, technical marketing manager for F5's BIG-IP Application Security Manager, sees 10GbE as the threshold for monitoring and security services, though. "Realistically, when we get to speeds like 40GbE or even 100GbE, for their implementation I just don't see that security will be implemented at that level."

FEBRUARY 1, 2008

STORAGE JANUARY 25, 2008

Optimal Storage Support

DataCore Unveils VM Starter SAN Bundle For Upgraded Portability

MODERN ENTERPRISES OF all sizes are seeing an increasing need for storage virtualization as they continue to expand to virtual environments. DataCore's release of the featureloaded, readily accessible VM Starter SAN package

offers newly enhanced data management capabilities for SMEs. This cost-effective SAN provides simplicity for any VM (virtual machine) yet runs efficiently on physical hardware.

Storage networking is now more convenient with the iSCSI-enabled VM Starter SAN package, capable of asynchronous IP mirroring and virtual disk emulation. The portability of the VM Starter SAN highlights its functional consolidation of virtual storage: The single server bundles allow for mobile protection of multiple VM environments.

The integrated SANmelody features make data migration (via SANmotion) an easy delivery task for the user due to real-time repurposing. Old information can be placed elsewhere in the system, while primary data is allowed to occupy disk resource space for optimal utilization. Disk backup is simplified through the high-speed snapshot feature in which consolidated volumes are copied at one location rather than from multiple points.

DataCore's remote site recovery feature allows for maximum enterprise support through dual bundle operation. The simplified bundles demonstrate the advantages of



high-performance mobile VM SANs. For integrated systems relying on the portable Starter SAN, DataCore recommends that businesses use two bundles in order to provide moment-to-moment location continuity. One SANmelody package remains onsite, while

a second occupies the remote location. The Starter SAN can also function effectively as a single system and provide equally operative storage recovery.

DataCore's VM Starter SAN supports all major virtual machine vendors, such as Citrix, Oracle, Sun, VMware, and Microsoft. Additionally, the Starter SAN can run on Linux, Mac OS, and Netware, as well as Microsoft and Unix.

According to DataCore, the VM Starter SAN is cost-effective because it fills the spot in the market between smaller data protection systems and large-scale, high-priced platforms. It can provide broad system security, so the internal stability of your business won't be jeopardized.

DataCore VM Starter SAN

About \$4,000 per SAN server

Portable SAN bundle featuring auto-allocating storage support, enhanced data migration, and remote site disaster backup

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RAID 6 For Maximum

Data Protection

Winchester Systems' FlashDisk SX-2302S Offers Up To 60TB Of Storage



WHEN YOU'RE DEALING with massive amounts of storage, a RAID 6 setup is ideal because your disk array can survive two drive failures, and it provides an added layer of protection when rebuilding a drive. The FlashDisk SX-2302S from Winchester Systems is a SAS hosted disk array with dual-parity RAID 6 to offer maximum data protection.

The FlashDisk SX-2302S includes dual hardware ASICs (one for each of the independent parity calculations in RAID 6), so the SX-2302S offers RAID 6 performance similar to what you would see in a disk array that uses RAID 5. Ac-cording to Winchester, RAID 6 dual parity offers 500 to 30,000 times longer mean time to data loss than RAID 5. The Flash-Disk SX-2302S delivers a 1,150MBps sustained throughput and more than 78,000 disk I/O operations per second while maintaining mirrored cache for controller failover. The speedy ASIC hardware en-sures successful disk rebuilds after a failure.

The 2U base unit comes with a single RAID controller and 12 high-capacity disks, and you can add four 2U expansion shelves—each with 12 drives—to expand

the FlashDisk SX-2302S to 60TB when using 1TB drives. You can fit up to 252TB of storage into a 42U rack, making the SX-2302S ideal for enterprises with high-capacity needs. The SX-2302S also features two SAS 4X wide host ports for multihost connectivity without the costs of implementing a Fibre Channel infrastructure.

The FlashDisk SX-2302S supports full-featured protection in RAID 0, 1, 3, 5, 6, 1+0, 15, 16, 30, 50, and 60. It comes with 512MB of cache memory, upgradeable to 2GB of cache memory per controller. The FlashDisk SX-2300 line also provides real-time remote monitoring, automatic drive failure detection, failed drive rebuild, hot-swap drive capability, and online expansion. The base unit's nonvolatile cache uses a Li-Ion battery that works for a minimum of 72 hours, and it features dual hot-swap, redundant 460/530-watt power supplies.

Winchester Systems FlashDisk SX-2302S

Starts at about \$16,000

A SAS hosted SATA disk array with RAID 6 that can expand to a storage capacity of 60TB with 1TB drives

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Hot IT Jobs In 2008 & Beyond

What The Job Market Holds For IT

by Sue Hildreth

IF YOU'RE LUCKY ENOUGH to be a network systems or data communications analyst, 2008 should be a good year for finding a job, according to a recent survey by the U.S. Department of Labor's Bureau of Labor Statistics (aka BLS). By 2016, jobs for these positions are projected to have increased by 53.4% since 2006. Likewise, computer systems analysts, computer software application engineers, system software engineers, and database administrators will fare well during the next few years, according to the BLS.

Those predictions are largely supported by a second survey from staffing firm Robert Half Technology (www.roberthalftechnology .com), which identifies the top IT job areas in 2008 as networking, help desk and support, and applications development. The specific IT skills most in demand are Windows

Projected Hiring Activity 2008

According to a survey of 1,400 CIOs conducted by Robert Half Technology, IT hiring will remain steady in early 2008.

- 82% expected to have no change in their IT hiring plans
- 13% planned to increase IT hiring
- 3% said they'd decrease IT hiring
- 2% said they didn't know

Source: Robert Half Technology

administration, network administration, database management, firewall administration, and wireless network management.

Many of those "hot" IT jobs are tied to businesses' concerns over their IT infrastructure—the uptime and performance of the network, the servers, and the major software platforms, says Brian Hoffman, an IT recruiter for staff placement firm Winter, Wyman (www.winterwyman.com). "Even the smallest company knows that the platform and infrastructure is critical stuff. They can't afford to have the Web site go down or have EDI [Electronic Data Interchange] or ecommerce capabilities be compromised," he says. "We see steady heat in computer systems and networks because there are never enough good people to handle all of the needs that organizations have as they try to stabilize and standardize their platforms."

Jim Lanzalotto, vice president at Yoh Services (www.yoh.com), a talent and services outsourcing firm, says experienced SAP professionals, or others with knowledge of enterprise software platforms such as Oracle, will be in demand in 2008. Demand for SAP, Oracle, and other major ERP platform expertise is due to the pervasiveness of those types of applications throughout the enterprise, as well as the need to constantly update and integrate the various components of these massive platforms, says Lanzalotto.

"Pure infrastructure ERP experience will always be a big part of the market but so will knowledge of point solutions like CRM or supply chain software," he says.

IT Project Management Always In Demand

One job category not mentioned in the BLS survey, IT project management, is in

high demand and will continue to be in demand for the foreseeable future, says Lanzalotto. "Project management is a non-off-shoreable skill. It's such a hot skill right now it's unbelievable because you need project managers to pull all of this stuff together."

Lanzalotto's definition of a project manager involves enterprise-wide program management, not simply being a lead supervisor on a point project. And to reap the benefits of being a project manager, a person has to be certified by the PMI (Project Management Institute).

"Certification is key in the tech space," he says. "And so is the ability to understand business. I've seen people who have been cross-pollinated between business and technology do very well. That's critical as far as I'm concerned."

The rising demand for project managers who understand both business and IT is due to the growing communications gap between business executives and IT professionals—a gap that makes planning projects and creating strategy difficult. "Technology is an intrinsic part of the business. We're an SAP shop, for instance, and it makes it much easier for us to have someone who speaks the SAP language be on the business team," he explains. "The best CIOs I've seen have not been technology guys but a mix."

Industry Plays A Role In IT Employment

Aside from the technical niche you're in, the specific industry sector where you work will have a major impact on your job prospects, says Lanzalotto.

"We're learning that demand is not geographically driven nor skill-set driven but more sector driven. If you're in the

Growth Industries For 2008 & Beyond

Industry matters almost as much as job specialty, say IT recruiting experts. Here, according to the U.S. Department of Labor's Bureau of Labor Statistics, are the best industries for IT people to work in now through 2016.

- Management, scientific, and technical consulting services (5.9% annual growth)
- Individual and family services (5.7% annual growth)
- Home healthcare services (4.5% annual growth)
- Securities, commodity contracts, and other financial investments and related activities (3.9% annual growth)
- Facilities support services (3.8% annual growth)

mortgage business, for instance, or construction or housing business, it doesn't matter how great you are. But if you're working in the gaming industry, that's a good place to be," he explains.

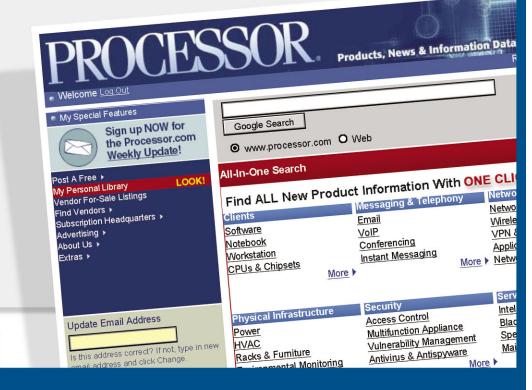
According to the BLS survey, the fastest growing industry sectors in terms of wage and salaried employment are health care and professional/business service. The industries experiencing a decline are manufacturing, natural resources and mining, and the federal government.

Overall, Lanzalotto expects slightly slower job growth in 2008. "2007 was a very strong year with some growth rates in the mid-single digits quarter by quarter. I think it will be in the lower single digits this year but still fairly strong."

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- 4. Browse the list and read the brief descriptions to find what you need, then click the link to see the complete article.



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WHAT'S HAPPENING

Prevent Data Loss During A Disaster

Lucid8's Tools Keep Damage To A Minimum

by Julie Sartain

ONCE UPON A TIME, disaster recovery, or DR, products and services were a lucrative business that attracted customers from coast to coast. But after just one disaster, recovery is no longer the issue—nobody wants to suffer through that agony twice. So the resolution is no longer how to recover from a disaster but instead how to prevent it in the first place—not the disaster, of course, because most disasters are considered acts of God, but the electronic damage occurred as a result of the disaster. Companies across the globe are asking: "How can we ensure zero to minimal data loss during a disaster?"

Lucid8 (www.lucid8.com), headquartered in Newcastle, Wash., has some options: GOexchange Preventive Maintenance and its two counterparts DigiVault Continuous Backup and DigiScope for Exchange. GOexchange enhances Microsoft Exchange Server performance and protects corporate data from disaster by removing errors and inconsistencies and then re-indexes the databases, significantly reducing data storage.

DigiVault protects corporate information 24x7 by continuously archiving email and other Exchange-related item changes as they occur. DigiScope provides e-discovery and recovery of individual mailboxes, messages, folders, attachments, etc. from existing Exchange server backups or unmounted information storage offline and PST files.

How It Works

According to Christian Stark, vice president of marketing and business development at Lucid8, GOexchange is a preventive maintenance and optimization tool. This tool enables customers to schedule preventive maintenance operations for the Exchange servers in an organization. After checking the Exchange database integrity, GOexchange defrags the databases and checks messages, attachments, and folders for consistency; it then deletes the corrupted objects within the mail store. Data stores are reduced by 30 to 55%; when used in tandem with an archiving product, the reduction can be up to 90% or more. This improves Exchange server performance and reduces backup times and storage requirements; plus, it reduces the possibility of Exchange crashes, which can occur as a result of store-related problems.

DigiVault is an Exchange-specific, CDP (continuous data protection) product that provides up-to-the-minute protection and disaster recovery of email servers. "DigiVault uses log shipping to permanently keep track of changes and is considered a 'true' CDP product," says Stark. It does not support brick-level restores of individual mailboxes and messages, which are enabled by Digi-Scope, and can natively access the DigiVault repository.

DigiScope facilitates e-discovery and recovery for Exchange online and offline databases, PST files, and DigiVault-generated backups, adds Stark. Customers can access all sources without having to run Exchange, except the live production database. It has powerful search capabilities to find items and enables IT admins to easily restore mailboxes, folders, or individual items to the live production database and/or allows legal professionals and IT administrators to search and export such items for external legal analysis.

Where It Came From

Founded in 1996, Lucid8 originally provided disaster recovery and business process consulting services for Microsoft Exchange customers. "During the early years, while many of our disaster recovery customers were grateful for the services we provided," says Stark, "what they really wanted was a way to avoid the disasters, rather than simply recover from them."

The DR business was (and still is) valuable, but Lucid8 had to address two issues. First, its goal was to help its clients get their email systems back up and running while minimizing lost productivity and data. Lucid8's DR team was very good at this phase, but the business model did not scale well—



this type of work requires tremendous expertise; plus, it's demanding, time-consuming, and extremely expensive for customers.

The second issue, notes Stark, was that once a client experienced an Exchange disaster, they never wanted to repeat that nightmare again. And although DR fees are high, they are a mere fraction of the cost when productivity and opportunity loss is factored in. "Many of the organizations we worked with in the early days realized that email would become the main data repository and, therefore, the system had to be solid. Data loss was simply not an option," says Stark.

Based on these two concerns, adds Stark, Lucid8 decided to build a product to address the issues that every Exchange system experiences. The company's goal, however, was to deal with these issues in a proactive, rather than reactive, process before they became major problems and then to enable its clients to run the proactive maintenance process without the help of a hired expert.

GOexchange was first released in 1998; however, it was only sold to clients after a disaster recovery engagement, enabling them to self-maintain the Exchange database and minimize the chance of a repeat disaster. "Our clients that used GOexchange raved about its effectiveness and repeatedly encouraged us to release a commercially available version," says Stark. "We knew that operating a consulting DR business and a software business were two very different working models and that trying to manage both simultaneously was neither smart nor viable." As a result, Lucid8 released GOexchange 2.x in October 2001 and then began transitioning to a software developer.

Stark notes that Lucid8's key asset is the deep technical knowledge the company has built around Exchange, which it continues to update and increase with every new release of Microsoft Exchange. "One of the fundamental differentiators between us and our competitors is that we are intensely focused on developing the best possible software at the most competitive prices for our customers," says Stark. "Our focus enables us to zoom in on customer problems and quickly address them with our software,"

Future Plans

Lucid8 is currently working on its 1.2 release for DigiScope, which includes some new features that were recommended and requested by its customers. "I don't know any other vendor who has combined Exchange backup capabilities with e-discovery in such an integrated and easy-to-use way as Lucid8," says Stark. "In summary, all three of Lucid8's products provide value when deployed alone; however, when combined with one or more of the other products, the value is multiplied in regard to the relationship between DigiScope and DigiVault."

THREE QUESTIONS

Maximizing Data Media Budgets

Data Media Source Offers Recertified Media & Professional Services To SMEs

by Joseph Pasquini

HEADQUARTERED IN SAN JOSE, CALIF., The Data Media Source (800/252-9268; www.datamediasource.com) specializes in offering a wide range of new and recertified magnetic data media, including DLT, SuperDLT, LTO, 3480, 3490e, 3590, 3570, TK50, 4mm-DDS, 8mm, AIT, QIC, 9-track, diskettes, and more.

In addition to carrying a large inventory of an assortment of brands, categories, and capacities of media, The Data Media Source also draws upon its 20 years of experience to provide media-related services to its SME client base. Such services include format conversion, forensic analysis, secure data destruction, and data recovery.

We recently asked Russ Hill, DMS' vice president for procurement, about the data media company and the role that his firm plays in the SME marketplace. Hill has responsibility for worldwide sourcing of new and used data media products from numerous market channels. His background includes purchasing management at CMT Trading & Recycling.

■ What are the biggest ITrelated issues facing today's small to midsized enterprise?

"One of the biggest IT concerns with our customer base revolves around the issue of previously used data media and how to responsibly dispose of obsolete inventory," says Hill. Media can become outdated as a result of hardware upgrades, outmoded formats, and unnecessary data storage. According to Hill, corporations in such situations can choose between destroying the media and selling it.

While perceptively inconsequential to a large corporation, the cost of tape media can unfortunately represent a significant budget line item to IT directors of small and even midsized enterprises. As a result, SME operations often need to question how such small pieces of tape could possibly be costing their departments so much. According to Hill, a viable solution for SMEs struggling with cost containment is for them to consider purchasing recertified tape media. "The second issue facing our customer base is whether to use all new data media or media that has

been certified for reuse by a reputable company," says Hill.

■ What should *Processor* readers know about your company's products?

The Data Media Source has two primary areas of focus: 1) purchasing and securely removing a company's used and excess data media and 2) certifying and remarketing media product for reuse.

Hill observes that companies commonly have highly sensitive data—such as customer information, software code, or credit card information—on their used media. "Responsibly disposing of this media means either recycling or reusing while maintaining the security of the data," says Hill. "We provide secure removal of the media and certified data eradication processes to ensure that the data is destroyed."

DMS remarkets the media certified for reuse under the trademarked name of Dual-Life (www.dual-life .com). "Dual-Life ensures that product has been meticulously inspected for both cosmetic and physical defects, 100% data eradicated and drive-tested, professionally

repackaged in custom packaging, and [has] the best warranty in the market," states Hill. "The product is guaranteed as good as new in terms of both product appearance and performance."

■ What makes your company unique?

"Recertified data media comes in all varieties in the market from simply a used tape in 'as-is' condition to a tape that may have been tested but is just thrown in a box," says Hill. "DMS' product, however, is the best looking and best quality tape designed to keep a customer for life." According to Hill, DMS' warranty successfully demonstrates the company's level of commitment.

In addition to its various product offerings, The Data Media Source also offers a full menu of related professional services. As a value-added option, customers can have media labeled, initialized, and formatted. Resellers will be interested to know that DMS also offers fast and flexible shipping options, including shipping unmarked packages so they look as though they came from your company to help maintain loyal customer relationships.

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The Backup Veteran: Tape

Does It Still Have A Place In Your SME's Long-Term Storage Strategy?

by Elizabeth Millard

ONCE A DOMINANT TECHNOLOGY for back-ONCE A DOMINANT TECHNOLOGY for back-up in data centers, tape has become just one of the choices for storage, and it has a num-ber of critics who claim that other media, such as disk arrays and optical media, are superior. Yet a significant number of small to midsized enterprises still employ tape for backup

small to midsized enterprises still employ tape for backup needs, and the media has its advocates as well, who effective and dependable strategy. For many data center managers, the use of tape will fall some-where in the middle, many experts note: They can use tape for some forms of backup while opting for different media in other circumstance. in other circumstances, such as for daily storage needs.

Tape's Future

A major advancement in tape the past few years has

been LTO (Linear Tape-Open), a technology created by companies such as HP (www.hp.com), IBM (www.ibm.com), and



Seagate (www.seagate.com), who got together to release a new format based on existing technologies. Now in its fourth generation. LTO-4, the specification is in standalone drives, as well as tape autoloaders and libraries, and many believe it will play a significant role in tape's future, particularly at companies that are interested in information lifecycle management.

The specification will be especially welcome at companies that have heterogeneous environments because it allows tapes written on one company's drives to be recovered on the machines of another vendor. For example, tapes created with HP drives can be read tapes created with HP drives can be read tapes created with HP drives can be read tapes. The specification of the midrange tape market. Creation of the spec has also driven capability. LTO-4 adds 256-bit AES encryption at the drive level and boosts performance over the previous

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Vista migration scena released version 4 of its Server. Lantronix lau its Distributed IT Manag the SecureLinx Branch (

and Microsoft released services designed for Not PowerFile announced the Appliance Enterprise Editi

CommandCenter NOC, a

monitoring appliance, is no Virtual Appliance model. ■

File Transfer Product Servi

nced ShadowProtect

from South River Techno

at the drive level and boosts at the drive level and boosts performance over the previous generation. LTO-4 drives can operate at 120Mbps, and cartifician support 800CR of the

idges support 800GB of un-compressed capacity. They also support Write-Once, Read-Many capability, a feature designed to protect tape content.

Strategy Strengths

One of the main strengths of tape is its portability, notes Hunter Bennett, had taphy affine at chief technology officer at chief technology officer at Ensynch (www.ensynch.com), a provider of IT infrastructure ser-vices, Tapes can be stored offsite at another facility and perhaps even at a few different facilities that are geographically distant that are geographically distant that are geographically distant Go to Page 10

ombating PDF Spammers

What To Do When Your Corporate Inboxes Fill Up With Unwanted Spam

Unsolicited emails might seem like just a UNSOLICITED EMAILS MIGHT seem like just a nuisance, but when you multiply a few messages by every corporate inbox, it can get to be a real problem. The latest trend is to use attachments, specifically files in Adobe's (www.adobe.com) PDF format, in an attempt to circumvent the antispam software. Other (www.adobe.com) PDF format, in an attempt to circumvent the antispam software. Other file formats, including Microsoft Word and Excel and the Zip compressed file, have shown up recently, as well. The biggest problem for

the good attachments from the bad ones. In reality, it is essentially the same problem with normal email, just in a different file format. While the most popular method a few months ago seemed to be embedded images, it's clear that keeping up with the few months ago seemed to be embedded images, it's clear that keeping up with the spammers can be a full-time job.

Knowing where a bad email comes from Knowing where a bad email comes from helps simplify the job of eliminating it altogether. The trick is to identify and isolate bad addresses without blocking a legitimate message. One of the newest trends of the companies is to use dynamic zombie bot-

cuit. Some vendors, such as Secure Com-puting, have developed relationships with other vendors and tools in the intrusion detection and firewall market to share realtime information in an attempt to identify

Go to Page 10

One of the newest trends is

Where Does Spam Come From?

message. One of the newest trends of the spanmers is to use dynamic zombie bothest oblast out an enormous amount of bogus email from a wide range of addresses. Zombie computers are infected with a virus, essentially turning them into a robot at the command of their master.

This makes the task of detecting span using a sender's address even more difficult. Some vendors, such as Secure Computing, have developed relationships with

and ShadowProtect Deskto EACH WEEK

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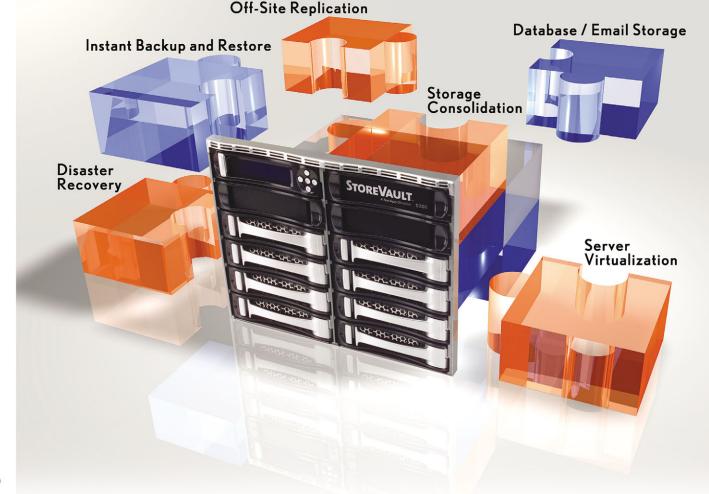
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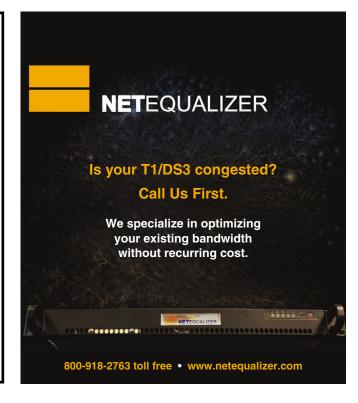
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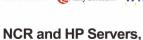














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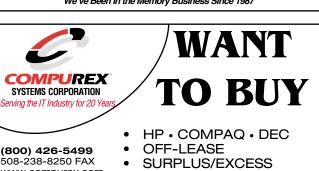
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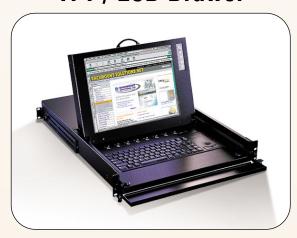
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